Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

By

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ABSTRACT

Background: Nearly one in eight individuals across the world lives with a mental disorder. Mental disorders contribute to the global burden of disease, and are the third largest contributor to the overall disease burden in South Africa. The availability of mental health services at primary health care level should reduce the burden of mental disorders. It was found that several studies have revealed that stigma prevents people from seeking mental health care which contributes to delays in their recovery. Consequently, it deprives them of their basic human rights and excludes them from society. Mental health stigma has been reported among nurses and other health care providers.

The aim of the study was to develop a protocol for primary health care (PHC) nurses to reduce mental health stigma at PHC services in the Western Cape.

Method: A multi-method approach comprising of quantitative, qualitative and systematic review was employed to conduct the study. Phase one consisted of a mixed method with a concurrent design, Phase two consisted of a systematic review, and Phase three was the development of the protocol. The Intervention Research: Design and Development (IR: D&D) model was applied as a methodological framework to guide the process of the study.

In Phase one(step one), a quantitative descriptive design with self-administered questionnaire was employed to assess PHC nurses' knowledge, beliefs and attitudes towards people with mental disorders. A random sample of 246 was obtained from 641 nurses employed at 31 PHC facilities within the Cape Town Metropole areas. Data were analysed using Statistical Package for the Social Sciences (SPSS) software version 27.

In Phase one (step two), a qualitative exploratory and descriptive design using a semi-structured interview guide was employed to explore mental health stigma and its reduction intervention. A purposive sample of eighteen (n=18) nurses selected from two 72-hour assessment units and from the same population participated in the survey study. Thematic analysis was employed using ATLAS.ti 9 software program.

Phase two: A systematic review was conducted to identify and synthesis an effective intervention to reduce mental helth stigma. A search identified 630 studies from seven databases namely CINAHL, Cochrane Library, ERIC, Google Scholar, MEDLINE, PsycARTICLES and PubMed. A total of 34 eligible studies were critically appraised using the quality assessment tool for quantitative studies and 27 studies were eligible for the full review.

Phase three: The protocol was developed using the Nominal Group Technique (NGT) to serve as a guide for PHC nurses to reduce stigma towards mental health care users at PHC facilities. The developed protocol was validated by experts in the field. All ethical principles were applied throughout the study process.

Results/Findings: The results of the survey indicated that PHC nurses had a lack of mental health knowledge, and hold negative beliefs as well as negative attitudes towards people with mental disorders. The qualitative findings revealed that PHC nurses had a good understanding of mental health stigma, but held negative beliefs and negative attitudes. The findings of the systematic review indicated that the educational intervention, contact intervention, or their combination were effective in reducing mental health stigma in the short-term. The developed protocol provides relevant guides on the importance of mental health training for nurses.

Conclusion: The gap in PHC nurses' mental health knowledge, beliefs and attitudes that led to mental health stigma, were identified. A protocol was developed as an effective intervention to address the stigma towards people with mental disorders at PHC services in the Western Cape province. The developed protocol will serve as a guide for nurses to reduce stigma towards mental health care users at PHC facilities. Recommendations to educational institutions and health service facilities were made. It is recommended that the Department of Health should facilitate and support the implementation of this protocol.

Key words: Nurses; Primary health care; Mental health knowledge; Mental disorders; Beliefs; Attitudes; Stigma; Development; Protocol; Interventions; Mental health stigma reduction.

DECLARATION

I declare that the *"Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape"* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Signed:

Names: John James Musafiri

ACKNOWLEDGEMENT

DEDICATION

➢ This doctoral thesis is dedicated to Almighty God the Creator; to Jesus Christ, the highest philosopher; to the Holy Spirit who inspired me.

➢ I dedicate this thesis to my late paternal grandfather 'Sogokuru' for his special love and hardworking role model, you predicted my potential on my birth.

➢ I also dedicate this thesis to my late father who moved me from his farm and took me to primary school, and to my late mother for her love and nostalgic voice.

➢ This thesis is dedicated to my wife and my children for their love; to my late parents-in-law, for the love they gave me. Finally, this thesis is dedicated to all my siblings.
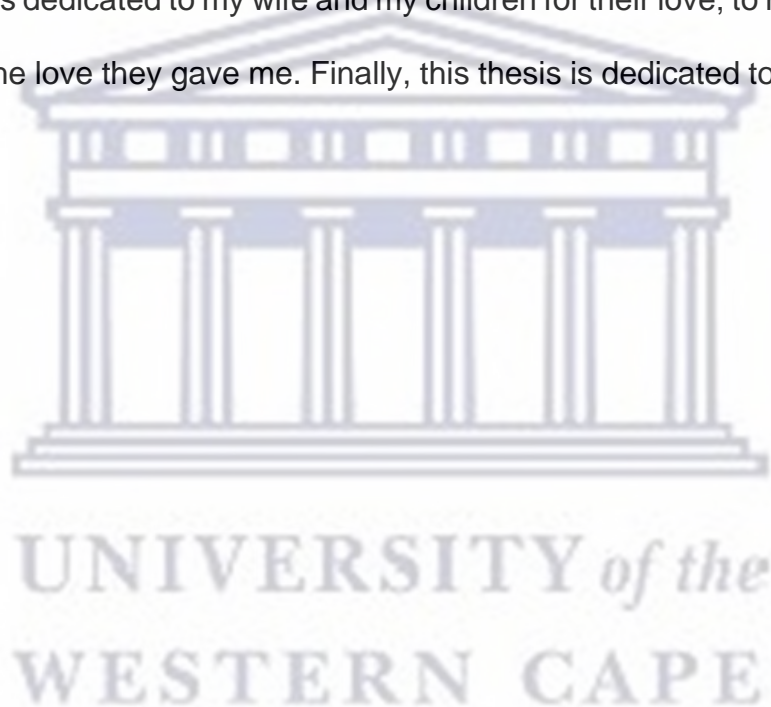
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LIST OF ACRONYMS AND ABBREVIATIONS

A: This letter refers to the initial of the surname of a mental health nurse

AIDS: Acquired immunodeficiency syndrome

BL: Acronym of a primary health care facility

CAMI: Community Attitudes toward the Mentally-Ill Scale

CDC: Community Day Centre

CHC: Community Health Centre

CoCT: City of Cape Town

DoH: Department of Health

DSM-V: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition

DSM-IV: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition

ENs: Enrolled Nurses

ENAs: Enrolled Nursing Assistants

EPHPP: Effective Public Health Practice Project

H: This letter refers to the initial of the surname of a mental health nurse

HIV: Human Immunodeficiency Virus

IR: D&D: Intervention Research: Design and Development

IPDP: Individual Performance and Development Plan

K: This letter refers to the initial of the surname of a mental health nurse

L: This letter refers to the initial of the surname of a mental health nurse

LVD: This refers to a surburb

MHCU/s: Mental health care user/s

MHLS: Mental Health Literacy Scale

NGT: Nominal Group Technique

P: Participant

PHC : Primary health care

PICO: Population, Intervention, Comparison,Outcome

PPHCN TRS MHCU: Protocol for PHC Nurses to Reduce Stigma towards MHCU

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses

RNs: Registered Nurses

SANC: South African Nursing Council

SOP: Standard Operating Procedure

TB: Tuberculosis

USA: United States of America

CHAPTER ONE

THE RESEARCH STUDY

1.1 Introduction

This chapter presents the background to mental disorders and stigma, nurses' related mental health stigma, nurses' mental health knowledge, their beliefs and attitudes towards people with mental disorders from global and local perspectives. The interventions used at global and local perspectives to reduce stigma towards people with mental disorders are discussed. This chapter also presents the problem statement, aim of the study, objectives of the study, theoretical framework, significance of the study, operational definitions, overview of the phases of the study and conclusion.

1.2 Background

Mental disorders contribute 13% to the global burden of disease (Dube & Uys, 2015). Mood, anxiety, personality and neurological disorders are the leading causes of burden of disease (Whiteford, Ferrari, Degenhardt, Feigin & Vos, 2015; Mutyambizi-Mafunda, Myers, Sorsdahl, Lund, Naledi & Cleary, 2019). In South Africa, mental disorders are counted as the third largest contributor to the overall disease burden (Silaule & Casteleijn, 2021). Depressive and anxiety disorders constitute a huge burden of mental disorders (Meyer, Matlala & Chigome, 2019; van der Walt, Mabaso, Davids & de Vries, 2019). Schizophrenia, substance induced psychosis also constitute a health concern in different provinces (Thungana, Zingela & van Wyk, 2019; Franken, Parker, Allen & Wicomb, 2019; Anic & Robertson, 2020; Botha, Koen, Niehaus, Vava, Moxley & Botha, 2020; Mokwena, Shandukani & Fernandes, 2021). The Western Cape province has the highest rate (42.0%) of lifetime prevalence of mental health

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disorders that contribute to the burden of disease (Jacob & Coetzee, 2018). However, stigma towards people with mental disorders prevents them from seeking professional help (Tay, Alcock & Scior, 2018).

At global level, the health care systems have not yet succeeded to respond to the burden of mental disorders (Wakida et al., 2018). The integration of mental health services into primary health care (PHC) faces challenges such as mental health stigma (Fulone, IBarreto, Barberato-Filho, de Cássia Bergamaschi, Silva & Lopes, 2021). The human resources for mental health care at PHC level are limited (Fulone et al., 2021) and there is unfair distribution of the funds (Castelpietra et al., 2022; Subramaniam, Shahwan, Goh, Tan, Ong & Chong, 2022) required to respond to mental health needs and mental health promotion (Docrat, Lund & Chisholm, 2019). These are some of the few challenges that contributed to the prevalence of mental health stigma.

In South Africa, the integration of mental health services into PHC has been implemented by deinsitutionalising the mental health services as one way of reducing stigma towards people with mental disorders (Dube & Uys, 2016). The Mental Health Care Act 17 of 2002 underscores the need for reduction of this stigma (Republic of South Africa, 2002). However, professional and institutional stigma towards people with mental disorders still continue to occur in the health care system (Jacob & Coetzee, 2018). The health care providers' stigma (professional stigma) discourages people with mental disorders from seeking professional help (Isobell, 2013; Matsea, 2017; South African Government, 2021). People with mental disorders are discriminated against and labelled in health care institutions; as a result, they are reluctant to seek mental health care services.

Stigma towards people with mental disorders includes negative beliefs about mental disorders and people with mental disorders, it also includes emotional reactions and

discriminatory behaviour towards people with mental disorders (Corrigan, 2000; Taghva, Farsi, Javanmard, Atashi, Hajebi & Khademi, 2017). Studies documented the abovementioned negative beliefs (Larkings & Brown, 2017; Murat, Öz, Güner & Köse, 2021) as resulting from a lack of mental health knowledge (Corrigan, 2000). These negative beliefs were noted among nurses in different countries such as in Turkey (Ozer, Varlik, Ceri, Ince & Arslan-Delice, 2017), Australia (Weare, Green, Olasoji & Plummer, 2019), Indonesia (Subu et al., 2021), Zambia (Kapungwe et al., 2011) and in South Africa (Joubert, 2018; James, 2020). At global level and in South Africa, studies mostly documented nurses' negative beliefs about people with mental disorders being seen as unpredictable, dangerous and aggressive (de Jacq, Norful & Larson, 2016; Cremonini, Pagnucci, Giacometti & Rubbi, 2018; Al-Awadhi, Atawneh, Alalyan, Shahid, Al-Alkhadhari & Zahid, 2017; Joubert, 2018).

Studies found that nurses hold negative attitudes towards people with mental disorders (Sahile, Yitayih, Yeshanew, Ayelegne & Mihiretu, 2019; Koutra, Mavroeides & Triliva, 2022; Ghuloum, Mahfoud, Al-Amin, Marji & Kehyayan, 2022). For instance, these negative attitudes were noted among nurses in Taiwan (Hsiao, Lu & Tsai, 2015) and in Croatia (Arbanas, Rožman & Bagariü, 2019). Nurses expressed their frustration caused by caring for people with mental disorders whom they feared resulting in self-distancing from them (Beks, Healey & Schlicht, 2018; Fujii, Hanya, Kishi, Kondo, Cates & Kamei, 2018; Jansen, Hem, Dambolt & Hanssen, 2020; Sim, Ahn & Hwang, 2020).

Negative beliefs and attitudes towards people with mental disorders stem from a lack of mental health knowledge (Brondani, Alan & Donnelly, 2017; Yin, Wardenaar, Xu, Tian & Schoevers, 2020). Studies identified gaps in nurses' mental health knowledge at global level (Shilubane & Khoza, 2018; Mendenhall et al., 2018; Card & McGlynn,

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2020; Rathobei, Nyangu & Dube, 2021). For instance, nurses' lack of mental health knowledge related to the signs and symptoms of common disorders was noted in China (Hao et al., 2020), in Kenya (Marangu et al., 2021) and in Ethiopia (Haile & Sahile, 2021). A lack of knowledge of signs and symptoms of common disorders was found among PHC nurses in South Africa (Motaung, 2017) including the Western Cape province (Van Zyl, 2016; Maconick, Jenkins, Fisher, Petrie, Boon & Reuter, 2018). An increase in mental health knowledge contributes to the reduction of stigma towards people with mental disorders (Wong, Arat, Ambrose, Qiuyuan & Borschel, 2019; Akasyah, 2020). Given the prevalence of this stigma and the needs for its reduction, interventions were developed (Kutcher, Wei & Coniglio, 2016; Knaak, Szeto, Kassam, Hamer, Modgill & Patten, 2017).

Interventions namely educational, contact, and the combination of both interventions were mostly used to reduce stigma towards people with mental disorders (Corbière, Samson, Villotti & Pelletier, 2012; Jorm, 2012; Kutcher, Bagnell & Wei, 2015; Knaak & Patten, 2016). However, little is known about the effect of protest intervention was reported (Bilge & Palabiyik, 2017). The abovementioned interventions mostly targeted the general public (Carr, Wei, Kutcher & Heffernan, 2018; Lo, Gupta & Keating, 2018) and health care profession students (Mullor, Sayans-Jimenez, Cangas & Navarro, 2019). Knowledge about the effectiveness of these interventions in reducing nurses' stigma towards people with mental disorders in South Africa seems to be limited.

1.3 Problem statement

Stigma towards people with mental disorders in the health care system, particularly among health care providers has been identified as a major barrier to access treatment as well as a contributor to the poor quality of mental health care (Knaak et al., 2017; Vistorte, Ribeiro, Jaen, Jorge, Evans-Lacko & Mari, 2018; Wogen & Restrepo, 2020;

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Moro & Rocha, 2022). Stigma also impacts help-seeking behaviours of health care providers themselves and negatively mediates their work environment (Ross & Goldner, 2009; Wallace, 2012; Vistorte et al., 2018). Studies found that even medical students, residents, and nurses, were reluctant to seek mental health treatment due to their concerns about being stigmatised by their colleagues, which has the effect of delaying treatment (Brower, 2021; Dyrbye et al., 2015; Guille, Speller, Laff, Epperson & Sen, 2010). Research conducted in Brazil revealed that PHC providers had pessimistic and stereotypical views about recovery from mental disorders (Moro & Rocha, 2022).

Mental health care services have been integrated into PHC level within South Africa; however, the quality of these services depends on PHC health care providers' mental health knowledge, beliefs and attitudes towards MHCU (Kigozi-Male, Heunis & Engelbrecht, 2023). Among these health care providers, PHC nurses are considered as the frontline of patient care (Igumbor et al., 2016). In South Africa, stigma towards people with mental disorders has been documented in the health care system (Ayano et al., 2017; Meyer et al., 2019). A study conducted in South Africa by Kigozi-Male et al. (2023) to assess PHC nurses' mental health knowledge and attitudes towards people with mental disorders found that there was a significant proportion of a lack of mental health knowledge among PHC nurses. The same study by Kigozi-Male et al. (2023) found that PHC nurses had stigmatising attitudes towards people with mental disorders.

Nurses employed at secondary and tertiary levels of care were reported to hold negative beliefs and attitudes towards people with mental disorders in South Africa (Poggenpoel, Myburgh & Morare, 2011; Van Zyl, 2016; Mabala, van der Wath & Moagi, 2019; Mulaudzi, Mashau, Akinsola & Murwira, 2020). These negative beliefs

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and attitudes were also noted among PHC nurses in South Africa (Card & McGlynn, 2020; Kigozi-Male et al., 2023) such as in the Western Cape province (Hendricks, 2018) where there is the highest rate (42.0%) of lifetime prevalence of mental health disorders (Jacob & Coetzee, 2018).

With the integration of mental health services into PHC, it was hoped that stigma towards people with mental disorders would be reduced (Dube & Uys, 2016). However, this stigma still occurs and inhibits people with mental disorders from seeking mental health care which, in turn, contributes to delays in their recovery from mental health disorders, and contributes to poor mental health outcomes and increases the socio-economic burden (Isobell, 2013; Egbe, Brooke-Sumner, Kathree, Selohilwe, Thornicroft & Petersen, 2014; Folb et al., 2015). Studies reported that a lack of mental health training and awareness about mental disorders, and inadequate experiences contributed to health care providers' stigma towards mental disorders (Dalky, Abu-Hassan, Dalky & Al-Delaimy, 2020). In this regard, a concerted effort to reduce stigma towards people with mental disorders is needed (Stuart, 2016). However, the researcher found that in South Africa there are insufficient studies about PHC nurses' stigma towards people with mental disorders and interventions used to reduce this phenomenon.

1.4 Aim of the study

The aim of the study was to develop a protocol for PHC nurses to reduce stigma towards mental health care users at PHC services in the Western Cape.

1.5 Research objectives

Phase one (step one): objectives

1.5.1 To determine PHC nurses' level of knowledge about mental disorders

1.5.2 To assess PHC nurses' beliefs about mental disorders and people with mental disorders

1.5.3 To determine PHC nurses' attitudes towards mental disorders and people with mental disorders

Phase one (step two): objective

1.5.4 To explore mental health stigma and its reduction intervention among nurses working at primary health care facilities

Phase two: objective

1.5.5 To identify and review existing effective interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment

Phase three: objective

1.5.6 To develop intervention protocol for PHC nurses to reduce mental health stigma at primary health care services

1.6 Theoretical framework

This study was framed with Weiner's (1985) attributional theory of achievement motivation and emotion. Weiner's theory describes the causes of negative stereotypes towards mental disorders and guided this study in assessment of nurses' knowledge, beliefs and attitudes towards people with mental disorders. This study was also framed by Corrigan's cognitive stigma model (2000) that provides guidance on mental health stigma reduction by replacing the negative stereotypes about mental disorders with accurate information. To better understand the causes of PHC nurses' stigma towards

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people with mental disorders, both Weiner's attributional theory and Corrigan's cognitive stigma model were used.

1.6.1 Weiner's attributional theory

This theory explains how people examine the negative situation of individuals and try to determine these individuals' level of controllability of this negative situation, level of responsibility for occurrence of this situation and level of its stability. The responsibility (locus), controllability and stability refer to the three dimensions of causes of a negative situation (Weiner, 1985). For the purpose of the current study, the negative situation refers to a mental disorder. Weiner's theory (1985) describes an attribution as a causal explanation for an event or behaviour, for instance mental disorder. People strive to form an attributional explanation for an event or a behaviour such as the aggression of people with mental disorders. Furthermore, Weiner's theory (1985) explains the internality or externality of an attribution. Therefore, people can determine the responsibility for a negative situation. An example of the internal attribution is when nurses believe that people with mental disorders are responsible for their own mental disorder while the external attribution is when nurses believe that it is not the fault of people with mental disorders to have a mental disorder.

Another dimension refers to controllability of the cause of the negative situation that the responsible person could have controlled. Mbuthia, Kumar, Falkenström, Kuria and Othieno (2018) explained that the controllability dimension from Weiner's theory (1985) is related to a situation that is believed to be controllable, meaning that an individual can guide, influence, or prevent the situation. In this regard, people might think that people with mental disorders can control aggressive behaviour. Supporting this statement, people with mental disorders are believed to be the cause of their own condition which they can control (Nxasana & Thupayagale-Tshweneagae, 2016).

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Corrigan (2000) explained that the controllability dimension leads to two classes of an individual's emotional reactions towards people with mental disorders. One of the two classes is the individual's pity for people with mental disorders who are unable to control an event, and another class is the individual's anger towards people with mental disorders who can control an event (Corrigan, 2000). For instance, nurses might have positive attitudes towards people with mental disorders if they believe that people with mental disorders cannot cause their own illness. However, nurses might stigmatise people with mental disorders if they believe that they caused their own mental disorder. In this regard, the controllability or uncontrollability of the cause of a negative situation influences people's emotional reactions (i.e. anger or pity) towards an individual's situation (Weiner, 1985).

The third dimension refers to stability and it is regarded as the ability of the cause of a negative situation to occur in future. For instance, nurses believe that mental disorders are incurable (Chou & Tseng, 2020); therefore, they believe that people with mental disorders will never recover from their mental disorder. This can be explained by recurrent admissions in acute mental health inpatient units of the same people with mental disorders unable to restore their ability for social functioning (D'orta, Herrmann & Giannakopoulos, 2021). Moreover, nurses might hold the negative stereotypes towards people with mental disorders such as beliefs about unpredictability (Joubert & Bhagwan, 2018). Nurses who believe that people with mental disorders are aggressive (Ramacciati, Ceccagnoli, Addey & Rasero, 2018) might think that the aggression will reoccur over time. In conjunction with the three causal dimensions, people's negative stereotypes about mental disorder should be replaced with accurate information to reduce mental health stigma (Corrigan, Morris, Michaels, Rafacz & Rüsch, 2012). Therefore, stigma reduction is aimed at changing attributions and can

be effective using accurate information that challenges a specific knowledge structure associated with stereotypes (Weiner, 1985).

Weiner's theory (1985) has been used by many researchers as a framework for conceptualising disease stigma and studying the stigmatisation of individuals with medical conditions such as HIV and lung cancer (Stump, 2010). Weiner's theory has effectively guided the development of interventions to reduce people's negative attitudes towards patients with depression in Taiwan (Han & Chen, 2014) and in the United States of America (USA) (Ruybal & Siegel, 2017).

1.6.2 Corrigan's cognitive stigma model

Corrigan (2000) developed a cognitive stigma model and argued that Weiner's attributional theory (1985) helps researchers to gain a deep understanding of the nature of stigma from the people's views and to reduce stigma by reversing the construction of their negative stereotypes. Corrigan (2000) explained that attributional theory identifies constructs (stereotypes) that should be targeted in mental health stigma reduction programmes. Corrigan's cognitive stigma model extended the concepts of Weiner's theory by explaining the relationship between the signalling events (behaviour of people with mental disorders), mediating knowledge structures (controllability attributions with individual's attitudes about dangerousness and self-care of people with mental disorders), emotional reactions (pity, anger and fear) and behavioural responses (helping and punishing behaviours). Corrigan (2000) argues that the behaviour of people with mental disorders serves as a stigma signal (cue) that triggers the individual's stereotypes about people with mental disorders which regrettably lead to the discrimination (behaviour) against people with mental disorders. The stigma signal refers also to the discriminative stimulus, while stereotypes refer to cognitive mediators (Corrigan, 2000). Corrigan (2000) acknowledges that the

attributional theory is suitable for understanding and changing stigma due to the relationship map among signaling events, mediating knowledge structures, emotional reactions, and behavioral responses. Corrigan (2000) explained that stereotypes (beliefs) affect the signals; for instance an individual can see a person with mental disorder and links this person to a danger to others resulting in fear. Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) was in the study of Bentzen-Mercer (2021) and helped to understand and interpret the attributions of emergency room nurses towards people with mental disorders.

1.6.3 Theoretical framework application

As indicated in Figure 1.1, the application of Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) guided this study to develop an in-depth insight and understanding of PHC nurses' mental health knowledge, their beliefs and attitudes towards people with mental disorders, their understanding of the nature of stigma and their opinions about interventions that can be used to reduce stigma. Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) provided a guide in interventions to reduce stigma towards people with mental disorders. Corrigan (2000) argued that people who believe that a mental disorder is under the people with mental disorders' control likely respond to that patient with anger in a form of punishment. It is believed that nurses' misinformation (lack of information or insufficient information) and their negative beliefs (attributions) can lead to their negative attitudes towards people with mental disorders. Given that people have a desire to learn about the causes of a negative situation (Weiner, 1985), the knowledge of nurses about mental health stigma at PHC services and their understanding of the nature of stigma towards people with mental disorders can determine their learning needs.

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The aim of the study is to develop a protocol for PHC nurses to reduce stigma towards mental health care users at PHC services in the Western Cape.

Based on the three dimensions namely the responsibility, controllability, and stability (Weiner, 1985), the researcher determined nurses' mental health knowledge and identified the respondents' learning needs. Based on the cognitive process of mental health stigma described by Corrigan (2000) in terms of the relationship signalling events, mediating knowledge structures, emotional reactions and behavioural responses, the researcher investigated nurses' mental health knowledge, assessed their beliefs and determined their attitudes towards people with mental disorders. Prior to developing a protocol to reduce stigma towards people with mental disorders, the researcher explored nurses' understanding of mental health stigma and its reduction intervention, and identified the existing interventions (educational intervention, contact intervention or the combination of both interventions, and protest intervention) used for health care providers to reduce stigma towards people with mental disorders.

Based on Weiner's theory (1985) and Corrigan's cognitive stigma model (2000), the protocol is aimed at educating PHC nurses on mental disorders targeting an improvement in their mental health knowledge, a positive change in their beliefs and attitudes. Therefore, Weiner's theory and Corrigan's cognitive stigma model were needed to frame the study, as shown in the Figure 1.1.
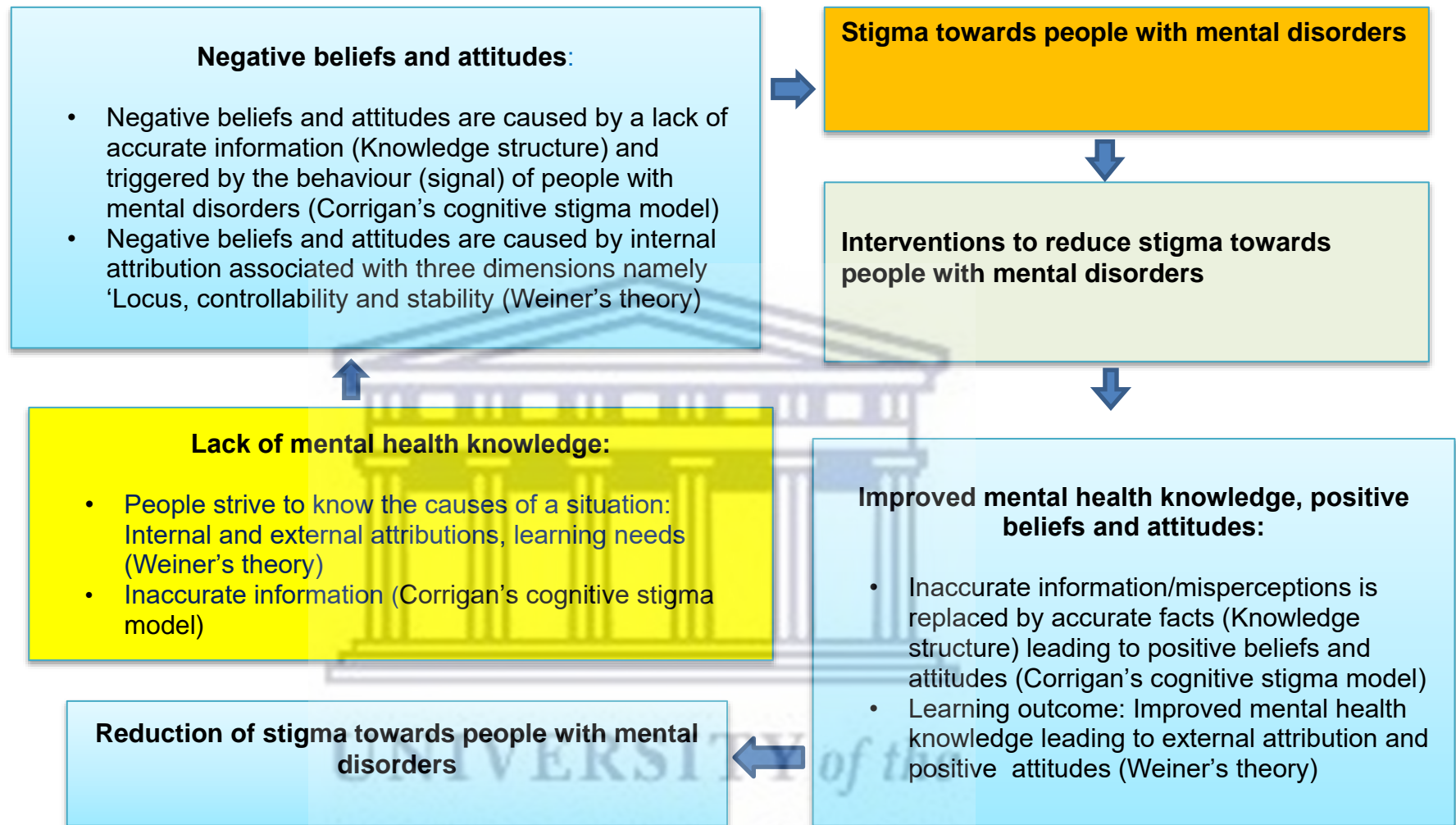
Figure 1.1: Adapted Weiner's theory (1985) and Corrigan's cognitive stigma model (2000)

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1.7 Significance of the study

The findings of this study will inform the managers of PHC facilities, the Health Department of Cape Town City Council and the Western Cape Department of Health about nurses' mental health knowledge, their beliefs and attitudes towards people with mental disorders. Moreover, the findings of the study were used in the development of a protocol for PHC nurses to reduce stigma towards mental health care at PHC services. The development of the protocol could serve as a guide to reduce PHC nurses' stigma towards people with mental disorders. The findings of this study will inform the nursing schools about the lack of mental health knowledge and skills among PHC nurses; thus indicating evidence of gaps in mental health training. Moreover, the findings of this study can inform the development of nursing curricula at the nursing schools about the importance of the integration of mental health stigma and its reduction in the psychiatric nursing modules. Hence, the nursing students can benefit from this study through the awareness of mental health stigma and its reduction.

1.8 Operational definitions

The operational terms and their descriptions used in this study are presented in Table 1.1.

Table 1.1: Terms and their descriptions

Terms	Descriptions
1. Attitude towards people with mental disorders	The attitude is described as a learned predisposition used by an individual to respond consistently to a given object or a group of objects, event or activities in a negative or positive manner (Feldman, 1966). It also refers to the beliefs, opinions, and thoughts (at cognitive domain level), feelings and emotions (at affective domain level), and actions (behavioral domain level) towards a specific person, object, event, or thing (Martin, Lloyd & Singh, 2002). For the purpose of the current study, attitude refers to nurse's emotions and feelings, and behaviors towards mental health care users.
2. Beliefs about people with mental disorders	They refer to "the cognitive act or state in which a proposition is considered to be true" (Egan, 1986). In this study, beliefs mean stereotypes or preconceived notion of primary health care nurses about mental disorders. The terms beliefs and stereotypes will be used interchangeably.
3. Health care professionals	The health care professionals include nurses, physicians (medical doctors), social workers, psychologists, pharmacists, dieticians, physiotherapists and occupational therapists (Haboubi & Lincoln, 2003; Boult, Green, Boult, Pacala, Snyder & Leff, 2009). In this study, the term 'health care professionals' has the abovementioned meaning. However, the concept 'health care providers' is used to refer to the 'health care professionals' and health care profession students.
4. Mental disorders	They are also known as mental illnesses or mental conditions. They refer to the conditions which are characterised by various symptoms affecting the way an individual thinks, behaves or feels (Western Cape Government, 2022). Moreover, mental disorders are described as conditions in which a person's cognition, behaviour or emotional regulation, is clinically and significantly disturbed (World Health Organisation, 2022a). Mental disorders can refer to mental health

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	conditions; however, mental health conditions are an umbrella concept that includes psychosocial disabilities, mental disorders, and any mental states marked by significant distress, impaired functioning, and risks associated with self-harm (World Health Organisation, 2022a). In this study, the concept 'mental disorders' mean conditions in which an individual's cognition, behaviour or emotions are clinically and significantly disturbed.
5. Mental health knowledge	Knowledge refers to an information about a subject, its understanding from experience or learning (Trevethan, 2017). Mental health knowledge refers to the general public and health care providers' mental health knowledge. For the general public, mental health knowledge might be limited to the capacity to identify early warning signs and symptoms of mental disorders, recognition of active signs and symptoms, understanding of risk factors and causes of mental disorders in general (Tesfaye et al., 2022). Moreover, the general public should be aware of available professional help and appropriate mental health services, and the impact of mental health stigma on the lives of people with mental disorders (Tesfaye et al., 2022). For the purpose of this study, nurses' mental health knowledge includes the definition, causes/risk factors, signs and symptoms, and management of the common disorders. It also includes the knowledge of mental health stigma, its causes and impact on the lives of mental health care users.
6. Mental health care user	This refers to an individual receiving care, treatment and rehabilitation services or using a health service at a health facility aimed at improving the mental health status (Middleton, 2020; Republic of South Africa, 2002). This concept is used in the South African context. For the purpose of this study, the concept 'mental health care user' (MHCU) is used interchangeably with the concept 'people with mental disorders'. The concept 'mental health care user' is mostly used in the

	title of this study and its aim, and in the protocol in line with the Mental health Care Act 17 of 2002.
7. Mental health stigma	Stigma refers to an individual's social identification given by society members who devalue his/her characteristics (Crocker, Major & Steele, 1998). Mental health stigma refers to negative beliefs and negative attitudes towards people with mental disorders (Salama, Tadroos, Sikandar, Ashraf & Khan, 2021). In this study, mental health stigma refers to negative beliefs and negative attitudes towards mental disorders, people with mental disorders.
8. Nurse	The term 'nurse' refers to a person registered with a professional body in order to practise nursing or midwifery (South African Nursing Council, 2005). In this study, the term 'nurse' refers to a person practicing nursing and includes an enrolled nursing assistant, enrolled nurse and registered nurse listed as registered nurse.
9. Professional nurse	"A professional nurse is a person who is qualified and competent to independently practise comprehensive nursing in the manner and to the level prescribed and who is capable of assuming responsibility and accountability for such practice" (South African Nursing Council, 2005). The terms 'professional nurse' and 'registered nurse' are used interchangeably in this study.
10. Professional stigma	It refers to the health care providers' stigma towards people with mental disorders (Dobransky, 2019). In this study, it refers to stigma held by the health care providers, meaning the 'health care professionals' and health care profession students.

1.9 Overview of the phases of the study

Table 1.2 presents the Overview of the phases of the study namely phase one (Survey and qualitative studies), phase two (Systematic review) and phase four (Design and development of the protocol).

Table 1.2: Overview of the phases of the study

PHASES	Objectives	Theoretical framework	Research method & design	Target population	Sampling & sample size	Instrument	Data collection	Data analysis
PHASE ONE (step one)	1.5.1 To determine PHC nurses' knowledge about mental disorders 1.5.2 To assess PHC nurses' beliefs about mental disorders and people with mental disorders 1.5.3 To assess PHC nurses' attitudes towards people with mental disorders	Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) guided the researcher to have an insight into nurses' mental health knowledge, beliefs and attitudes towards people with mental disorders and to establish their relationship	Quantitative descriptive survey design	Professional nurses	Simple random sampling, sample size of 234	Self-report questionnaire	Survey	SPSS version 27, descriptive analysis, univariate and bivariate analyses, Independent-Samples Kruskal-Wallis Test

PHASE ONE (step two)	1.5.4 To explore mental health stigma and its reduction intervention at PHC services from PHC nurses' views	Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) guided the researcher to have an insight into nurses' mental health stigma, its causes, nurses' attitudes and stigma reduction	Qualitative exploratory and descriptive	Professional nurses	Purposive sampling, sample size of 18	Semi-structured interview guide	Individual interviews	Atlas Ti.9, thematic analysis
PHASE TWO	1.5.5 To identify and review existing effective interventions in mental health stigma reduction	Corrigan's cognitive stigma model (2000)	Systematic review	Health care providers and health care profession students	----------	-----------	Data extraction	The Quality Assessment Tool for Quantitative Studies
PHASE THREE	1.5.6 To develop intervention	Intervention Research: Design	NGT	Mental health	Purposive sampling,	Questionnaire	Discussion and	Content analysis

| | protocol for PHC nurses to reduce mental health stigma at PHC services | and Development model of Rothman and Thomas (1994), NGT allowed the different ideas on development of a protocol to be expressed and collated through the use of five steps | | experts (nurses, facility managers and psychiatrists) | sample size 6 for NGT1 and 10 for NGT2 | | Questionnaire for NGT participants | |
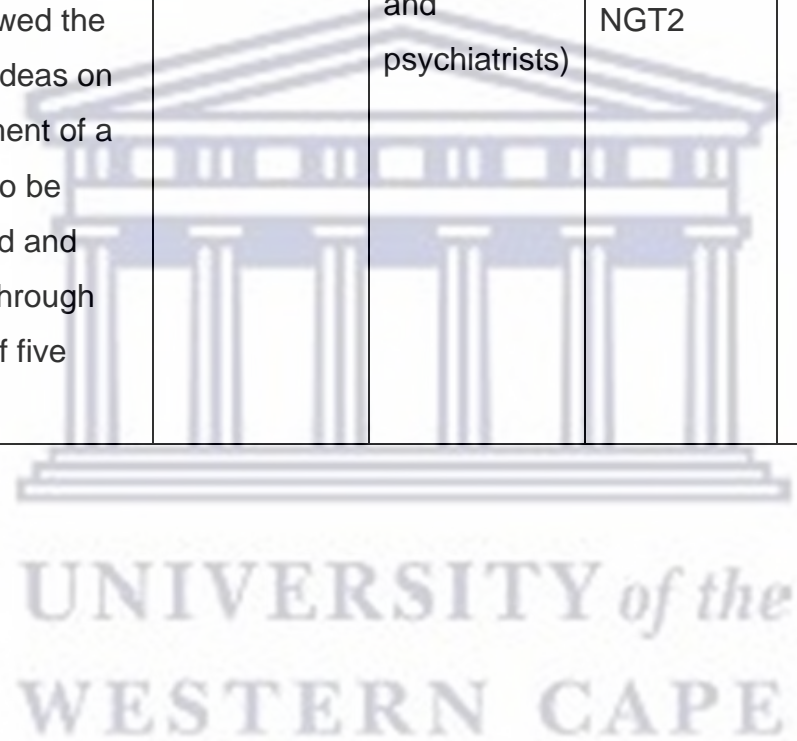
1.10 Summary

The background of the study provides the prevalence of mental disorders such as depression and anxiety from global and local perspectives. It presents the integration of mental health services into PHC in progress though stigma towards people with mental disorders prevents them from seeking professional help. Nurses' mental health knowledge, attitudes and beliefs about people with mental disorders are discussed. Interventions used to reduce stigma towards people with mental disorders focused on the stigma reduction among the general public. The problem statement is contextualised and justifies a need to identify the interventions focused on nurses and to develop a protocol for nurses to reduce mental health stigma at PHC services in the Western Cape.

1.11 Outline of the thesis

This thesis comprises ten chapters.

Chapter one: presents the introduction and background to the study in terms of the prevalence of mental disorders, integration of mental health services into PHC, mental health stigma and its reduction interventions. Chapter one also presents the problem statement of this study, the research aim and objectives, the theoretical framework, the significance, operational definitions, the overview of the phases and the summary of this chapter.

Chapter two: presents the literature review associated with understanding of stigma in general and mental health stigma, nurses' mental health knowledge, beliefs and attitudes towards people with mental disorders, interventions used to reduce mental health stigma, and the summary of this chapter.

Chapter three: discusses the research methodology used in the three phases included in this study. This chapter provides a detailed description of research designs, research

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settings, population, sampling methods, data collection and analysis, ethics, and the summary of this chapter.

Chapter four: presents and discusses the results from the quantitative component of the study (step one of Phase one). These results related to PHC nurses' mental health knowledge, beliefs and attitudes towards people with mental disorders.

Chapter five: presents and discusses the results from the qualitative component of the study (step two of Phase one). These results associated with PHC nurses' understanding of mental health stigma and its causes, PHC nurses' attitudes towards people with mental disorders and mental health stigma reduction.

Chapter six: presents and discusses the results from the systematic review (Phase two). These results related to the existing interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment.

Chapter seven: presents the summary of the findings from the three study components (quantitative and qualitative, and systematic review).

Chapter eight: presents the development process of the protocol (Phase three) for PHC nurses using the Nominal Group Technique.

Chapter nine: presents and discusses the protocol developed for PHC nurses (Phase three) to reduce stigma towards MHCU (PPHCN TRS MHCU).

Chapter ten: presents evaluation, limitations, recommendations, and conclusion

The following chapter, Chapter two presents the literature review.

2.1 Introduction

This chapter presents the review of literature related to the understanding of mental health stigma. The review was done in accordance of the objectives of the study and concepts relevant to mental health stigma. It presents: the definition of mental health stigma, its types, prevalence, causes and impact on the lives of people with mental disorders. It also discusses nurses' mental health knowledge, their beliefs and attitudes towards people with mental disorders. The interventions implemented to reduce mental health stigma which include educational intervention, contact intervention, combination of educational and contact interventions, and protest intervention are briefly discussed in this chapter. Lastly, this chapter provides a conclusion of the literature review.

2.2 Search strategy

A search was undertaken using eleven electronic databases: APA PsycArticles, CINAHL, Cochrane Library, ERIC, Google Scholar, MEDLINE, PsycARTICLES, PubMed, Sage journals, The Lancet, Tylor and Francis. The search considered unpublished, and published articles from 2017 to 2023. The primary research articles, as well as the articles used for the systematic review and grey literature were included. Only quantitative, qualitative, and mixed method full text articles and abstracts written in the English language were considered.

The keywords applied during the search included: anti-stigma intervention, approach to reduce stigma mental illness, education/contact/protest interventions, interventions to reduce stigma, mental health literacy, mental health stigma, mental health stigma reduction, nurses' attitudes towards people with mental disorders, nurses' beliefs about mental

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disorders, nurse's mental health knowledge, reducing stigma towards people with mental illness. The literature search focused on the articles of which the participants were nurses, and health care providers and the research settings were health care facilities. The literature search generated articles of which the research settings included the high-income, middle-income and low-income countries.

2.3 Understanding of stigma

Stigma refers to a mark that makes a person look different from other people and become subject to labelling (Dieujuste, 2016). Stigmatised groups lose their values and consequently their well-being is negatively affected (Earnshaw, Watson, Eaton, Brousseau, Laurenceau & Fox, 2022). They suffer from unfair discrimination and loss of human rights. Stigma makes them inferior to the rest of society's members (Jassir Acosta et al., 2022). Studies found that people with mental disorders are subject to stigma (Frempong & Spence, 2019; Abdulla, Webb, Mahmmod & Dalky, 2022). Stigma is also attached to physical illnesses such as tuberculosis (Mbuthia et al., 2020), human immunodeficiency virus (Walker, 2019) and COVID-19 (Rewerska-Juśko & Rejdak, 2022).

2.4 Mental health stigma

The mental health stigma includes negative beliefs and attitudes towards people with mental disorders (Samari et al., 2018; Rayan & Fawaz, 2018; Abdullah & Brown, 2020). It also refers to the agreement of a stigmatised person with people's beliefs about mental disorders (Chatmon, 2020). In the next sections: definition of mental health stigma, types of mental health stigma, causes of mental health stigma, and impact of mental health stigma are discussed.

2.4.1 Definition mental health stigma

Mental health stigma refers to societal disapproval, or when society places shame on people living with mental disorders or seeking help for psychological distress, such as

anxiety, depression, bipolar disorder, post-traumatic stress disorder (Ahmedani, 2011). Mental health stigma consists of negative beliefs and negative attitudes towards people with mental disorders (Salama et al., 2021; Koschorke, Al-Haboubi, Tseng, Semrau & Eaton, 2022). These negative beliefs and attitudes are associated with lack of mental health knowledge (Okafor, Oyewale, Ohazurike & Ogunyemi, 2022; Shim, Eaker & Park, 2022). People with mental disorders are seen as dangerous, aggressive, unpredictable, incompetent to name a few (Subramaniam et al., 2017; Yvon & Prouteau, 2017). As a result, nurses avoid people with mental disorders (Grover et al., 2020) because of the fear (Sapag et al., 2018; Tambag, 2018). Mental health stigma also includes self-stigma which is a set of negative beliefs and attitudes towards oneself (Nguyen & Li, 2020). This study focuses on professional stigma that is discussed under point 2.4.2.3.

2.4.2 Types of mental health stigma

Mental health stigma is divided into main categories namely public stigma, self-stigma and professional stigma (Lee, Jeong & Yi, 2020). In this study, public stigma and self-stigma are briefly discussed as the focus of the study is on the professional stigma.

2.4.2.1 Public stigma towards people with mental disorders

Public stigma is also known as social stigma (Chatmon, 2020). It refers to the general public's negative beliefs and attitudes towards people with mental disorders (Dobson & Rose, 2022; Tremlin & Beazley, 2022). People with mental disorders are perceived by general public to be incompetent, unpredictable, aggressive (Eissa, Elhabiby, El Serafi, Elrassas, Shorub & El-Madani, 2020; Nguyen & Li, 2020; Brower, 2021). These beliefs seem to be fixed in people's minds because of the lack of knowledge. The general public do not want to associate with people who have mental disorders (Pescosolido, Halpern-Manners, Luo & Perry, 2021) and exclude them from the society (Luo, He, Mohamed & Rosenheck, 2018; Mongrain & Shoikhedbrod, 2021). People with mental disorders suffer

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from discrimination in terms of education, employment and housing (World Health Organisation, 2022b). They are marginalised and discriminated against, they are labelled with derogatory terms.

2.4.2.2 Self-stigma

Self-stigma also refers to internalised stigma (Nguyen & Li, 2020). This means that self-stigma occurs when a stigmatised person internalises public stigma (Chatmon, 2020). For instance, higher depression symptomatology is correlated with greater levels of self-stigma and lower desire of seeking professional help (Lee et al., 2020). The fact that people with mental disorders accept and internalise the negative beliefs and attitudes of the public stigma discourages them from seeking mental health care. As a result, they feel excluded from the community, ashamed, inadequate and different from people who are viewed as normal (Subu et al., 2021).

2.4.2.3 Professional stigma towards people with mental disorders

Professional stigma refers to the stigma held by health care providers; for example, nurses' negative beliefs and attitudes towards people with mental disorders (Dobransky, 2019; Rivera-Segarra, Varas-Díaz & Santos-Figueroa, 2019; Subu et al., 2021). Professional stigma towards people with mental disorders has been reported by the studies that investigated nurses' beliefs and attitudes towards people with mental disorders (Pekurinen, Willman, Virtanen, Kivimäki, Vahtera & Välimäki, 2017; Olashore, Akanni & Ogundipe, 2018; Johanna, Elin, Mats, Henrik & Jonas, 2022). Nurses' beliefs about unpredictability, dangerousness and aggression of people with mental disorders are often reported (Brunero, Buus & West, 2017). The detailed nurses' negative beliefs about people with mental disorders are discussed under point 2.6.

Regarding nurses' negative attitudes towards people with mental disorders, such as fear, avoidance, frustration, anger are mostly reported a part of professional stigma (Beks et al.,

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2018; Nóbrega, Fernandes, Duarte, Moreira & Chaves, 2020). For instance, a study carried out in the USA by Rivera-Segarra et al. (2019) reported nurses' fear of people with mental disorders. A similar study undertaken in Norway identified nurses' frustration caused by caring for people with mental disorders (Jansen et al., 2020). A study conducted in the Eastern Cape province of South Africa reported that nurses shouted at people with mental disorders and did not listen to them (van Rooyen, Shasha, Topper & Strümpher, 2019). People with mental disorders might anticipate stigma at PHC facilities and avoid seeking help (Tay et al., 2018; Vorstenbosch, Masoliver-Gallach & Escuder-Romeva, 2022). The detailed nurses' negative attitudes towards people with mental disorders are discussed under point 2.7.

2.4.2.4 Structural stigma towards people with mental disorders

Structural stigma refers to an institutional or systemic stigma and it is related to the policies, laws and regulations that work to the disadvantages of a stigmatised group (Wogen & Restrepo, 2020; Thornicroft et al., 2022). Structural stigma prevents stigmatised groups from getting opportunities and resources that facilitate their well-being (Stangl et al., 2019). For instance, mental health services are underfunded (Mugisha et al., 2019), which impacts negatively on people with mental disorders (Smith, Knaak, Szeto, Chan & Smith, 2022).

The politicians/policy-makers seem to neglect mental health; the financial resources are not fairly distributed to respond to mental health needs (Docrat et al., 2019; Nguse & Wassenaar, 2021; Freeman, 2022; Freeman & Mulutsi, 2022). The World Health Organisation (2022b) recommends that policy-makers should attribute more funds to mental health services. Both structural stigma and professional stigma defer people with mental disorders from seeking professional help (Livingston, 2020). Structural stigma towards people with mental disorders can be reinforced by health care providers who

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discriminate against them in caring environment (Subu et al., 2021). On the other hand, inadequate funding for mental health services is a barrier to mental health training (Middleton, 2020) to reduce stigma among nurses. Hence, structural stigma seemingly contributes to professional stigma (Smith et al., 2022).

2.4.3 Causes of professional stigma

A lack of mental health knowledge is viewed is a cause of mental health stigma. For instance, a study carried out in Qatar by Ghuloum et al. (2022) showed that nurses' lower levels of negative attitudes towards people with mental disorders were associated with their higher levels of education. A study undertaken in Malaysia by Hanafiah and Van Bortel (2015) using nurses found that a lack of knowledge of mental disorders was the main cause of mental health stigma. In South Africa, a study undertaken in the Gauteng province found that PHC nurses' mental health stigma was due to the lack of mental health knowledge (Kigozi-Male et al., 2023). Stigmatising group has a lack of mental health knowledge about mental disorders' causes, risk factors, and the signs and symptoms.

Mental health stigma is also caused by negative beliefs about people with mental disorders viewed as unpredictable, dangerous and aggressive (da Silva, Baldaçara, Cavalcante, Fasanella & Palha, 2020). Nurses' exposure to people with mental disorders can decrease these beliefs. A study carried out in Bahrain found that nurses who were frequently exposed to people with mental disorders held less negative attitudes comparatively to nurses who were not in contact with them (Al Saif, Al Shakhoori, Nooh & Jahrami, 2019). This means that nurses' higher levels of familiarities with people with mental disorders lower their negative attitudes towards them because the social contact is one of the interventions to reduce mental health stigma.

Moreover, the abnormal behaviour of people with mental disorders can trigger stigma towards them (da Silva et al., 2020). Since someone has observed the aggressive or

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strange behaviour of a person with a mental disorder can cause her/him to attribute the same behaviour to other people with mental disorders. Corrigan's cognitive stigma model (2000) explains how the behaviour of people with mental disorders can trigger the negative beliefs of stigmatising groups. The fact that individuals view people with mental disorders as dangerous can increase the desire for social distance (Samari et al., 2018).

2.4.4 The impact of professional stigma

Research has emphasised the adverse effects of stigma on people with mental disorders (Kennedy & Prock, 2018; Tay et al., 2018). People with mental disorders are deprived from their basic human rights, they feel ashamed, disliked, isolated and they suffer from social and economic marginalisation (Stuart, 2016). Moreover, mental health stigma makes people with mental disorders lose their status, humiliated and guilty (Birtel, Wood & Kempa, 2017; Kennedy & Prock, 2018; Jassir Acosta et al., 2022). It makes them feel worthless and experience low self-esteem (Carpiniello & Pinna, 2017) and depression (Oexle, Waldmann, Staiger, Xu & Rüsch, 2018; Huggett et al., 2018). These feelings are a part of self-stigma (McCann, Renzaho, Mugavin & Lubman, 2018; Chatmon, 2020; Gärtner, Asbrock, Euteneuer, Rief & Salzmann, 2022).

Given that people with mental disorders face health care providers' negative attitudes at health care facilities prevents them from seeking professional help (Tay et al., 2018). In this situation, professional stigma might be more deleterious than public stigma as they may anticipate their discrimination and refuse to seek treatment (Vorstenbosch et al., 2022). A study conducted in United Kingdom by Tay et al. (2018) reported that people with mental disorders had the fear of being negatively judged and did not seek professional help. Similarly, a study conducted in Limpopo province of South Africa reported that people with mental disorders were called crazy, which prevented them from continuing to seek help such as follow-ups (Bill & Carbonatto, 2022). The fact that people with mental disorders do

not seek professional help prevents them from getting treatment or they default on treatment. A study conducted in the Kwa-Zulu Natal province of South Africa reported that people with mental disorders defaulted on treatment due to the rude remarks made by health care providers (Mokwena & Ndlovu, 2021). It is evident that the fear of discrimination and labelling at health care facilities delay help-seeking and recovery among people with mental disorders (da Silva et al., 2020; Brower, 2021). Professional stigma hampers the effective care of people with mental disorders (Dalky et al., 2020; Tambag, 2018). This stigma might increase the prevalence of mental disorders and contribute to the burden of disease in South Africa (Folb et al., 2015).

2.5 Nurses' mental health knowledge

Studies have commonly used the concept of mental health literacy instead of mental health knowledge (Ogorchukwu, Sekaran, Nair & Ashok, 2016; Doll, Michel, Betz, Schimmelmann & Schultze-Lutter, 2021; Korhonen et al., 2022). Mental health literacy refers to an individual's ability to recognise specific mental disorders, his/her knowledge of how to seek information on mental health (Nguyen Thai & Nguyen, 2018). The information on mental health includes the knowledge of causes and risk factors of mental disorders (Tesfaye et al., 2021). Moreover, it includes signs and symptoms, self-treatment related to mental disorders and what professional help is available, and recognition of appropriate mental health help (Sampaio, Gonçalves & Sequeira, 2022). Based on the definition of mental health literacy, nurses should be given an opportunity to attend mental health training to acquire the information on mental health.

The Bloom's cut-off point was used to measure mental health knowledge scores (Arshad & Panza, 2023). Based on Bloom's cut-off point, knowledge is viewed as good if an individual's scores are between ≥80 and 100%, moderate if the scores are between ≥60 and 79%, and poor if the scores was less than 60% (Arshad & Panza, 2023). However, the

majority of the studies did not use the Bloom's cut-off point to assess nurses' mental health knowledge (Douglas, Standard-Goldson, James & Abel, 2018; Hao et al., 2020; Madlala, Miya & Zuma, 2020; Marangu et al., 2021).

A lack of mental health knowledge was noted among the majority (100, 95.0%) of the 105 nurses used in a study undertaken in Jamaica (Douglas et al., 2018). They reported that they were not prepared to care for people with mental disorders admitted in medical wards (Douglas et al., 2018). Nurses' lack of mental health knowledge related to the signs and symptoms of depression and anxiety disorders was reported in a study conducted in China (Hao et al., 2020). Similarly, 108 (67.0%) of the 162 PHC nurses lacked knowledge of signs and symptoms of depression and schizophrenia in a study carried out in Kenya (Marangu et al., 2021). In Sweden, a lack of mental health knowledge was also noted among nurses (Todorova, Johansson & Ivarsson, 2020; Derblom, Lindgren, Johansson & Molin, 2021). Moreover, a study conducted in Spain reported a lack of mental health knowledge among newly qualified professional nurses who indicated that they did not learn about schizophrenia and depression (López-Entrambasaguas, Martínez-Yebenes, Calero-García, Granero-Molina & Martínez-Linares, 2019). These disorders are common in society and should be included in modules teaching mental health. In a study undertaken in Ethiopia, poor mental health knowledge was reported among 242 (30.7%) 610 PHC nurse respondents (Sahile et al., 2019). At PHC level, professional nurses' lack of mental health knowledge regarding the symptoms of depression and schizophrenia was documented in a study was conducted in Kenya (Marangu et al. (2021).

In South Africa, a lack of mental health knowledge was found among PHC nurses (Maconick et al., 2018; Madlala et al., 2020). PHC nurses lacked mental health knowledge in a study undertaken in the South African provinces such as KwaZulu-Natal (Dube & Uys, 2016), Free State (Motaung, 2017) and Limpopo (Modula & Ramukumba, 2018). A study conducted in the KwaZulu-Natal province by Kemp et al. (2021) also reported a lack of

mental health knowledge among PHC registered nurses who were unable to identify depressive signs and symptoms.

The fact that registered nurses had a lack of mental health knowledge and skill while they had mental health training in their undergraduate programme can be linked to the lack of interest in continuing professional development in mental health care. Moreover, PHC nurses lacked mental health knowledge in a study undertaken in the South African provinces such as KwaZulu-Natal (Dube & Uys, 2016), Free State (Motaung, 2017) and Limpopo (Modula & Ramukumba, 2018). However, these studies did not establish the influence of the lack mental health knowledge on mental health stigma. In the Western Cape, studies addressing nurses' mental health knowledge are scarce. Given the lack of mental health knowledge reported among nurses in South Africa, there is need for mental health training. For instance, in-service training can improve nurses' mental health knowledge and lead to a positive change in their negative attitudes towards people with mental disorders (Matthews, Rhoden-Salmon, Silvera, Waite & Barton-Gooden, 2016; Chou & Tseng, 2020; Bellizzi et al., 2021).

2.6 Nurses' beliefs about people with mental disorders

Based on assumptions, a belief refers to the knowledge that is accepted as being true (Heiphetz, Spelke, Harris & Banaji, 2013). For the purpose of the current study, the beliefs are associated with the thoughts (at cognitive domain level) about specific persons as proposed by Martin et al. (2002) and Abun, Magallanes and Incarnacion (2019), meaning people with mental disorders (Larkings & Brown, 2017; Murat et al., 2021). Beliefs about the attributes, characteristics and behaviors of specific groups' members (Hilton & Von Hippel, 1996) can result in negative attitudes towards them (Khan, Benda & Stagnaro, 2012). Corrigan's cognitive stigma model (2000) explains that negative beliefs about people with mental disorders result from a lack of knowledge. Within health care systems, negative

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beliefs about people with mental disorders that have been mostly reported include their aggression, unpredictability and dangerousness (Del Olmo-Romero et al., 2019; Jombo, Idung & Iyanam, 2019; Zaraza-Moralesa et al., 2022).

A lack of familiarity with people with mental disorders, a lack of understanding of types of mental disorders and their signs and symptoms constitutes one of the reasons for the negative belief about their aggression (Alexander, Ellis & Barrett, 2016). An improvement in mental health knowledge can reduce the negative beliefs of nurses about people with mental disorders (Ibrahim et al., 2019). In general, the aggressive behaviour of people with mental disorders depends on the types of mental disorders and signs and symptoms (Pompili, Carlone, Silvestrini & Nicolò, 2017), which include anxiety, paranoia, visual or auditory hallucinations (Välimäki et al., 2022). It can be caused by interpersonal conflicts between the health care providers and people with mental disorders or among people with mental disorders themselves (Välimäki et al., 2022). Although certain people with mental disorders can be aggressive, de-escalation techniques for management of aggression are in place (Price et al., 2018).

Studies reported nurses' negative beliefs about people with mental disorders seen as aggressive (Joubert & Bhagwan, 2018; Ramacciati et al., 2018; Weare et al., 2019; Card & McGlynn, 2020). These beliefs were noted among 2143 (41.0%) of the 5228 nurses employed in the general hospitals in a study carried out in Finland (Pekurinen et al., 2017). Similarly, a study conducted in Australia identified nurses' beliefs about aggression of people with mental disorders (Weare et al., 2019). The same beliefs were reported among nurses in a study undertaken in Poland (Lickiewicz, Hughes & Makara-Studzinska, 2021) and among 27 (67.5%) of 40 nurses in a study conducted in Australia (Wearea et al., 2019). Moreover, a study carried out in in Botswana found that 125 (69.8%) of the 179 nurses perceived people with mental disorders as aggressive (Olashore et al., 2018).

In South Africa, newly registered nurses who participated in a study conducted in the Gauteng province believed that people with mental disorders were aggressive (Mabala et al., 2019). Similarly, beliefs about aggression of people with mental disorders were reported by 386 (88.6%) of 436 nurses in a study conducted in the KwaZulu Natal province (Joubert, 2018). This phenomenon is explained by Corrigan's cognitive stigma model (2000) that indicates how nurses' belief can be triggered by the presence of a person with a mental disorder. Consistent with the above, the PHC registered nurses who participated in a study conducted in the Gauteng province by Card and McGlynn (2020) reported the aggressive behaviour of people with mental disorders. Moreover, the findings indicated that cultural beliefs and lack of mental health knowledge can result in negative beliefs and attitudes towards people with mental disorders (Card & McGlynn, 2020).

Nurses' belief about aggressive behaviour of people with mental disorders can subside if they have increased exposure to and learn how to manage them (Mabala et al., 2019). Mental health training should be available to all nurses not just those who are employed in mental health units. For instance, nurses employed in a mental health unit In Sweden requested to be trained in management of aggression (Hylén, Engström, Engström, Pelto-Piri & Anderzen-Carlsson, 2019).

Findings from Kapungwe et al. (2011) indicated that PHC nurses in Zambia believed that people with mental disorders were dangerous and unpredictable. Negative beliefs about people with mental disorders being seen as dangerous were documented among PHC nurses in Finland (Ihalainen-Tamlander, Vähäniemi, Löyttyniemi, Suominen & Välimäki, 2016). Similar to these findings, a study conducted in Turkey identified nurses' beliefs about dangerousness of people with mental disorders (Ozer et al., 2017). Similar beliefs were reported among nurses in studies carried out in Spain, Portugal and Italy (Del Olmo-Romero et al., 2019), Saudi Arabia (Alyousef & Alhamidi, 2023) and Madagascar

(Randrianarivo et al., 2023). A study conducted in Canada reported nurses' negative beliefs about people with mental disorders seen as unpredictable and dangerous (Sukhera et al. (2017). Consistent with these findings, studies undertaken in Sweden (Bjorkman, Andersson, Bergström & Salzmann-Erikson, 2018; Johanna et al., 2022).

In South Africa, a study conducted in the Western Cape province by Sobekwa and Arunachallam (2015) and another study carried out in the Gauteng province by Mabala et al. (2019) indicated that nurses held similar beliefs. Moreover, beliefs about people with mental disorders being seen as unpredictable were noted among 415 (95.2%) of 436 nurses in a study conducted in KwaZulu Natal (Joubert & Bhagwan, 2018). In the North West province, 98 (42.9%) of the 229 PHC nurses believed that people with mental disorders were dangerous (James, 2020). Based on the above findings, nurses' negative beliefs about people with mental disorders pose a concern in mental health services.

2.7 Nurses' attitudes towards people with mental disorders

The attitudes are described as opinions and thoughts (at cognitive domain level), feelings and emotions (at affective domain level), and actions (behavioural domain level) towards a specific person, object, event or thing (Martin et al., 2002; Abun et al., 2019). For the purpose of the current study, the concept of attitudes refers to the individual's emotions, feelings, and behaviours. Therefore, the attitudes used in this study represent the affective and behavioural domains while the cognitive domain was discussed under the 'concept beliefs'. Nurses' negative attitudes towards people with mental disorders have been reported (Alexander et al., 2016; Al-Awadhi et al., 2017; Dalky et al., 2020).

Several studies reported nurses' fear of people with mental disorders in different countries such as in Finland (Ihalainen-Tamlander et al., 2016), Iran (Ebrahimi, Jafarabadi, Areshtanab, Pourabbas, Dehghan & Vahidi, 2017) and in Italy (Cremonini et al., 2018). This fear was also noted among nurses in Taiwan (Chou & Tseng, 2020), in Indonesia

(Subu et al., 2021) and in the USA (Isbell, Chimowitz, Huff, Liu, Kimball & Boudreaux, 2023). A study conducted in Finland reported the fear of people with mental disorders among non-mental health nurses and newly practicing nurses (Ihalainen-Tamlander et al., 2016). This fear was probably due to nurses' lack of mental health knowledge and skills for mental health care. Nurses' fear and frustration caused by caring for people with mental disorders might be attributed to a lack of mental health knowledge and aggression management skills (Poggenpoel et al., 2011). Nurses' mental health training including management of aggression can reduce the fear of people with mental disorders who display aggressive behaviour. Studies showed that nurses' fear of people with mental disorders was influenced by their negative beliefs about aggression, dangerousness and unpredictability of people with mental disorders (Jombo et al., 2019; Alyousef & Alhamidi, 2023; Isbell et al., 2023). The effects of these beliefs include nurses' social distance from people with mental disorders (Jombo et al., 2019), which negatively affects the quality of mental health care (Sim et al., 2020). It is of grave concern that nurses who are expected to care for the patients without discrimination (Mulaudzi et al., 2020) stay away from people with mental disorders (Chandler, 2018).

A Korean study also indicated that nurses who feared people with mental disorders perceived them to be unpredictable and aggressive (Joung, Jang, Shim, Ko & Shin, 2017). In a study conducted in Rwanda, a total of 72 (57.4%) of 126 PHC nurses were scared of staying next to an individual living with a mental disorder and 75 (59.4%) expressed their desire to avoid people with mental disorders (Baziga, 2017). The findings from the study by Baziga (2017) indicated that the fear leads to avoidance of people with mental disorders. Consistent with these findings, Corrigan and Watson (2002) stated that fear results in avoidance of people with mental disorders. Nurses' avoidance of people with mental disorders due to their fear was also documented in Spain, Portugal and Italy (Del Olmo-Romero et al., 2019).

Moreover, nurses' fear of people with mental disorders was also documented in Turkey (Çaynak, Keser & Günbayi, 2021) as well as in the United Arab Emirates (Salama et al., 2021). In Saudi Arabia, this fear was found among nurses who believed that people with mental disorders could assault them (Alyousef & Alhamidi, 2023). Similar findings were documented in a study carried out in the USA (Isbell et al., 2023). The findings of Nóbrega et al. (2020) and Isbell et al. (2023) pointed out that nurses distanced themselves from people with mental disorders because they were fearful of them.

Nurses' social distance and their reluctance to care for people with mental disorders are interconnected. This reluctance has been noted among nurses (Kaba, Triantafyllou, Fasoi, Kelesi & Stavropoulou, 2020) such in the USA where nurses limited interactions with people with mental disorders because of fear (Isbell et al., 2023). Consistent with these findings, a study carried out in Saudi Arabia indicated that nurses distanced themselves from people with mental disorders or limited their communication with them (Alyousef & Alhamidi, 2023). Moreover, nurses' avoidance of people with mental disorders was reported in a study carried out in Sri Lanka (Baminiwatta, Alahakoon, Herath Kodithuwakku & Nanayakkara, 2023). Nurses' frustration caused by caring for people with mental disorders was documented in a study carried out in Spain (López-Entrambasaguas et al., 2019) and in the USA (Isbell et al., 2023). While certain nurses experienced frustration, others experienced anger and irritability while caring for people with mental disorders in the USA (Dean, Butler & Cuddigan, 2021) and in Sri Lanka (Baminiwatta et al., 2023).

In South Africa, studies identified nurses' negative attitudes towards people with mental disorders (Poggenpoel et al., 2011; Van Zyl, 2016; Mabala et al., 2019). A study carried out in the KwaZulu-Natal province found that 300 (75.8%) of the 396 nurses experienced anger and frustration and 377 (95.2%) had fear caused by caring for people with mental disorders (Joubert & Bhagwan, 2018). Nurses' fear of people with mental disorders was recorded in

the Gauteng province (Mabala et al., 2019; Card & McGlynn, 2020) and in the Limpopo province (Mulaudzi et al., 2020).

Since nurses fear people with mental disorders whom they are expected to care for, they need mental health training. Nurses should gain mental health knowledge and skills required to manage people with mental disorders displaying various signs and symptoms (Lowe, 2019). Thus, nurses can overcome their fear (Maconick et al., 2018) and build good relationships with people with mental disorders (Hartley, Raphael, Lovell & Berry, 2020).

2.8 Interventions to reduce professional stigma of people with mental disorders

Studies indicated that the educational intervention, contact intervention, combination of both interventions and protest interventions were used to reduce mental health stigma; however, little effect of protest intervention was reported (Bilge & Palabiyik, 2017; Davies, Beever & Glazebrook, 2018; Kim, Werner, Richardson & Anstey, 2019).

2.8.1 Educational intervention

The educational intervention consists of replacing negative beliefs about mental disorders and people with mental disorders with accurate knowledge (Gronholm, Henderson, Deb & Thornicroft, 2017). The education intervention consisting of mental health courses/modules focused on health care profession students' mental health care stigma (Gambini, Destrebecq, Ferrara, Terzoni & D'Agostino, 2019; Mullor et al., 2019; Vilar Queirós, Santos & Madeira, 2021).

The education interventions also targeted practising nurses' mental health stigma reduction. For instance, the educational interventions yielded a positive change nurses' negative attitudes towards people with mental disorders in China (Li et al., 2019), and in the USA (Walker, Vanderhoef, Adams & Fleisch, 2022). In South Africa, educational intervention was used for health care providers to reduce stigma towards people with mental disorders. For instance, educational intervention led to a positive change in nurses'

negative attitudes in a study conducted in the following provinces: Eastern Cape, Free State, KwaZulu-Natal, Limpopo and the Northern Cape (Duby, Fong-Jaen, Nkosi, Brown & Scheibe, 2019).

2.8.2 Contact intervention

Studies focused on contact interventions used to reduce health care profession students' stigma towards people with mental disorders (Brown, 2019; De Witt et al., 2019). Contact intervention comprises two types namely direct and indirect contact. Direct contact intervention refers to a face-to-face contact between stigmatising individuals and people with mental disorders (Martínez-Martínez, Sánchez-Martínez, Sales-Orts, Dinca, Richart-Martínez & Ramos-Pichardo, 2019). Indirect contact intervention involves watching films reporting the lived experience of people with mental disorders (Gürbüz, Yorulmaz & Durna, 2020; Amsalem et al., 2021; Ito-Jaeger et al., 2021).

The contact intervention enables stigmatising individuals to understand the experiences of people with mental disorders (Martínez-Martínez et al., 2019) and decreases their desire for social distance (Brown, 2019). The exposure and social interaction can decrease the fear of the stigmatising group; and as a result, a reduction in social distance from people with mental disorders.

Indirect contact intervention does not entail the face-to-face contact between stigmatising individuals and people with mental disorders (Makhmud, Thornicroft & Gronholm, 2022). It does not allow the conversation but it is an alternative option when a face-to-face contact is either impossible or difficult to be used; it is mostly used in natural environments such as schools and workplaces (White et al., 2021). In this regard, the use of videos in the waiting rooms at PHC facilities can facilitate mental health stigma reduction. The contact intervention increased the mental health knowledge among the health care providers and yielded a positive change in their negative beliefs and attitudes towards people with mental

disorders (Martínez-Martínez et al., 2019; Atienza-Carbonell, Hernández-Évole & Balanzá-Martínez, 2022). Studies used the contact intervention to reduce health profession students' stigma towards people with mental disorders (Thonon, Pletinx, Grandjean, Billieux & Larøi, 2016; Brown, 2019). In South Africa, few studies addressed specific interventions to reduce health care providers' stigma towards people with mental disorders (Naidoo & Mkize, 2012; Matsea, 2017). In the Western Cape province, contact intervention reduced medical students' negative attitudes towards people with mental disorders (De Witt et al., 2019).

2.8.3 Combination of educational and contact interventions

Studies have indicated that educational intervention has been supplemented by contact intervention to reduce stigma towards people with mental disorders (Amsalem et al., 2019; Douglass & Moy, 2019). The combination of the educational intervention and contact intervention was mostly used on health care profession students (Rubio-Valera, Aznar-Lou, Vives-Collet, Fernández, Gil-Girbau & Serrano-Blanco, 2018; Strassle, 2018; Inan, Günüşen, Duman & Ertem, 2019). The combination of educational and contact interventions improved mental health knowledge among medical students in Greece (Koutsouradi, Dimitrakaki, Agapidaki, Tountas & Lagiou, 2016). Moreover, this combination led to a positive change in nursing students' negative attitudes towards people with mental disorders in the Czech Republic (Winkler et al., 2017), as well as Israel (Itzhaki, Meridan, Sagiv-Schifter & Barnoy, 2017) and in Turkey (Tambag, 2018). With regard to practising nurses, the combination of both interventions decreased their negative attitudes towards people with mental disorders such as in the USA (Danielson, 2018; Harris et al., 2019), and in Spain (Eiroa-Orosa, Lomascolo & Tosas-Fernández, 2021).

2.8.4 Protest intervention

The protest intervention shames people's negative beliefs and attitudes towards people with mental disorders, meaning that the protest intervention prevents dissemination of misleading and inaccurate information about mental disorders (Koutsouradi et al., 2016). However, there is a scarcity of studies that investigated the effect of protest intervention in mental health stigma reduction. Supporting this statement, a review conducted by Waqas et al. (2020) found that the educational interventions and contact interventions were effective in reducing students' mental health stigma while the effect of the protest intervention was not noted. Moreover, Walsh and Foster (2021) conducted a review and their findings showed that the protest intervention was less commonly used.

2.9 Summary

Studies revealed that professional stigma towards people with mental disorders still occurs internationally as well as in South Africa. Studies indicated that nurses' lack of mental health knowledge is viewed as the cause of negative beliefs and negative attitudes towards people with mental disorders. People with mental disorders suffer from discrimination in health care institutions; as a result, they default on treatment and stop seeking professional help which delays their recovery from mental disorders. At global level, the educational intervention, the contact intervention, or the combination of both interventions were used to reduce mental health stigma.

The next chapter discusses the research methodology of the three phases included in this study.

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is organised into two sections. The first section consists of the justification for choice of the research methodology, an overview of paradigmatic assumption and a brief summary of the Intervention Research: Design and Development (IR: D&D), that guided the research process and development of the protocol. The second section comprises three phases: Phase one discusses the identification of problem analysis and has two steps. Step one is a quantitative study and step two is a qualitative study. It further discusses the data collection process and analysis. Phase two discusses information gathering to identify successful functional elements. Phase three deals with the design and development of the protocol using the Nominal group technique (NGT). The chapter also highlights the rigor of the study and ethical consideration, followed by the conclusion of the chapter. The next section starts by discussing the choice of research methodology and paradigm of the study and provides the rationale for selecting the multi-method research approach, intervention mapping model (Rothman & Thomas, 1994).

3.2 Choice of research methodology

A multi-method research refers to a type of research method that uses two or more distinct methods (Nielsen, 2010; Ahmed & Sil, 2012). The use of multi-method research increases the strength of the findings by eliminating the possible weaknesses of a single approach in terms of data needed to answer the research questions (McKendrick, 1999). Furthermore, a multi-method research allows the triangulation, known as the use of various methods, to collect data from a diverse range of population and settings, in order to minimise the risks of biases caused by the use of one specific method (Maxwell, Bickman & Rog, 2009; Denzin & Lincoln, 2018). Therefore, a multi-method research approach was the best suitable

method as it enabled the researcher to collect data required to answer the objectives of this study.

3.3 Research paradigm

A paradigm refers to key sets of beliefs and values accepted by members of a scientific community (Lincoln & Guba, 2013; Creswell & Clark, 2018). Moreover, a paradigm refers to a worldview or philosophy of science (Creswell, 2014a) that shapes the research approach, which refers to the research orientation that is primarily used with a specific paradigm (Creswell & Creswell, 2018). It is a way of thinking about how the research objectives will be reached (Devlin, 2018). It is perceived as general philosophical guidance about the nature and world of research (Creswell & Creswell, 2018).

The pragmatists believe in the existence of the reality that supports the objective research (quantitative approach) and subjective research (qualitative approach). They think that an individual can influence people's perceptions of the world (Al-Ababneh, 2020). The pragmatists believe in the combination of quantitative and qualitative approaches being integrated and not conflicting (Maarouf, 2019). The pragmatic worldview integrates many approaches for more understanding of the research problem and achievement of study objectives (Creswell, 2014b). The researcher believes that the pragmatic assumption is the right paradigm to structure and organise the current multi-method research approach. There are various assumptions, such as ontology (being), epistemology (known) and methodological assumptions that comprise the paradigm. Those assumptions related to the ontology, epistemology, and methodological assumptions are discussed below.

3.3.1 Ontology

The ontology refers to the reality or the existence of particular reality or phenomena (Al-Ababneh, 2020), it is the reality of what is to be investigated (Jacobs & Cornelius, 2022). In this study, the reality to be investigated is primary health care (PHC) nurse's mental health

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stigma. The researcher wanted to know the nature of mental health stigma and the factors associated with PHC nurse's mental health stigma.

3.3.2 Epistemology

Epistemology refers to the way we understand the nature of phenomena in the world (Maxwell et al., 2009), it refers to the nature of knowledge, the way in which we look at and make sense of the world (Al-Ababneh, 2020). In this study, the researcher used a survey to understand nurses' mental health knowledge and their beliefs and attitudes. The researcher interviewed the participants to understand the nature of mental health stigma and its intervention. A systematic review was conducted to determine the existing interventions that have been used to reduce mental health stigma.

3.3.3. Methodological assumptions

The concept of methodology refers to the strategy or action plan; it is a design or a process aligned with specific methods that the researcher has chosen towards achievements of the objectives of the study (Crotty, 1998). Regarding the methods, they are the procedures and techniques that the researcher employs to collect and analyse data in order to answer the research questions (Crotty, 1998). Research methods also refer to research approaches, known as plans for research, that extend the steps from broad assumptions to detailed methods of collecting, analysing and interpreting data (Creswell & Creswell, 2018).

Creswell and Creswell (2018) highlighted three approaches namely quantitative, qualitative and mixed methods. Research approaches that different researchers use to plan research studies can be similar regardless of various disciplines (Leedy & Ormrod, 2015). However, the techniques (research methodology) that those researchers employ to collect and analyse data might be particular to a given discipline (Leedy & Ormrod, 2015). Using any type of research approach, the selected methodology must always be appropriate to the specific data that the researcher needs to collect towards the research problem's resolution

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(Leedy & Ormrod, 2015). In this study, a concurrent mixed method design was used (Grønmo, 2020), meaning that both quantitative and qualitative data were concurrently collected in the same period without mutual influence.

In quantitative research methodology, methodological assumptions are associated with the deductive process while qualitative research methodology is an inductive process (Al-Ababneh, 2020). A quantitative research methodology allows the researcher to describe the variables, examine variables' relationships, and determine cause-and-effect interactions between those variables (Creswell, 2009). A qualitative research methodology involves the exploration and understanding of participants' knowledge and experiences (Creswell, 2014b; Mohajan, 2018). Qualitative research methodology is a method of inquiry in which a researcher can employ open-ended questions to collect textual data that are generated and analysed (Gaglio et al., 2020). Through participants' views, opinions, and exploration of their answers, these data help the researcher to have a better and deeper understanding of a phenomenon being studied (Gaglio et al., 2020). A qualitative research methodology uses inductive reasoning (Lobiondo-Wood & Haber, 2006). In this study, the inductive reasoning enabled the researcher to build a general conclusion on the understanding of the mental health stigma and its reduction from a specific group of knowledgeable participants.

3.4 Intervention Research: Design and Development (IR: D&D)

Intervention Research: Design and Development (IR: D&D) model of Rothman and Thomas (1994) consists of six phases: identify, analyse and contextualise the problem (Phase one); information gathering (Phase two); design (Phase three); early development and pilot testing (Phase four); evaluation and advanced development (Phase five) and dissemination (Phase six). During planning, a researcher should assess the feasibility of developing and implementing an intervention; this requires the identification and selection of credible

information sources, identification, and synthesis of relevant existing information (Rothman & Thomas, 1994). The intervention is developed based on synthesised research findings (Rothman & Thomas, 1994).

In phase one of IR: D&D, the problem analysis and project planning consisted of collecting data from Phase one (quantitative and qualitative studies) of this study to meet the following objectives:

- To determine PHC nurses' level of knowledge about mental disorders

- To assess PHC nurses' beliefs about mental disorders and people with mental disorders

- To determine PHC nurses' attitudes towards mental disorders and people with mental disorders

- To explore mental health stigma and its reduction intervention at PHC services among PHC nurses working at primary health care facilities

In phase two of IR: D&D (information gathering and synthesis) was conducted using a systematic review (Phase two of this study) to address the following objective:

- To identify and review existing effective interventions in reducing mental health stigma

After the collection of the relevant information in this phase, the findings from the three studies were synthesised.

For the purpose of this study, the third phase (design) of IR: D&D was combined with the first activity (early development) of the fourth phase (early development and pilot testing) of IR: D&D. Therefore, the two phases refer to Phase three (design and development) in this study. The objective of this phase was to develop intervention protocol for PHC nurses to reduce mental health stigma at PHC services (Objective 1.5.6).

This study used the first four phases of IR: D&D. The remaining activity (pilot testing) of the fourth phase, the fifth (evaluation and advanced development) and sixth phase (dissemination) were not applied in this study.

3.5 Phase one (step one): Quantitative study (Objectives 1.5.1, 1.5.2, 1.5.3)

The quantitative study was conducted under the first step of IR: D&D model to identify, analyse and contextualise mental health stigma. This phase presents the quantitative research approach, quantitative descriptive design, research setting, population, sampling and sample, data collection, data analysis, and conclusion.

3.5.1 Quantitative research approach

A quantitative approach was used in this study to collect the data related to nurses' mental health knowledge, beliefs and attitudes. As previously described, a quantitative approach allows the researcher to gather, analyse and interpret quantifiable data (Polit & Beck, 2012; Creswell & Creswell, 2018). A quantitative research approach permitted the researcher to measure numerical variables included in this study, meaning that the researcher looked at the variable/variables' quantities or amounts (Leedy & Ormrod, 2015). The participants provided the answers using a range of choices included in a rating scale. However, the survey questionnaires did not allow the participants the option of exploring the answers; this could have resulted in limited information about their knowledge, beliefs, and attitudes. A survey aimed to determine the frequency and distribution of variables' characteristics (Leedy & Ormrod, 2015) was used in this study.

3.5.2 Quantitative descriptive design

A descriptive study aims at describing the distribution of variables, it can be a single variable or multiple variables (Aggarwal & Ranganathan, 2019). A descriptive design consists of gaining information about the demographic characteristics, previous experiences, attitudes and opinions of the study participants through asking them relevant questions included in

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an instrument and tabulating their answers towards the achievement of the study's objectives (Leedy & Ormrod, 2015). In this study, descriptive design was used to describe the following variables; PHC nurses' basic knowledge of common disorders, their beliefs and attitudes towards people with mental disorders.

3.5.3 Research setting

This study was carried out in the eight health subdistricts of the Cape Town metropole, which is one of the six districts of the Western Cape province of South Africa (Cooperative Governance Traditional Affairs, 2020). Figure 3.1 depicts the eight health subdistricts (Department of Health Western Cape, 2004; Western Cape Government Health, 2016) included in this study. All eight of the health subdistricts, consisting of 47 Community Health Centres and Community Day Centres (Western Cape Government Health, 2016; City of Cape Town, 2017) were used. A Community Day Centre (CDC) refers to a PHC facility that provides a range of services such as care for acute and chronic illnesses, screening for symptoms of diseases (Chiwire, Evers, Mahomed & Hiligsmann, 2022). A CDC is open eight hours a day from Monday to Friday (Cullinan, 2006; KwaZulu-Natal Department of Health, 2022).

A Community Health Centre (CHC) provides the same range of services delivered at a CDC; however, it operates 24 hours a day and seven days a week for maternity, accident and emergency services delivery (Cullinan, 2006; KwaZulu-Natal Department of Health, 2022). Given that the baby clinics provide the services limited to the care of mothers and children, they were excluded from this study. In this study, the CDC and CHC refer to the eight PHC facilities which are operated by the City of Cape Town (CoCT) and thirty-nine which are operated by the Department of Health (DoH). This study was undertaken in the Cape Town metropole where the prevalence of common mental disorders has been documented. Psychotic disorders and substance-induced psychosis, mood disorders

especially depressive disorders, and anxiety disorders, were reported in the Cape Town metropole (Thomas, Cloete, Kidd & Lategan, 2015; Scheepers, 2019).

Figure 3.1: Adapted map of eight health subdistricts of the Cape Town metropole (Mokitimi, Jonas, Schneider & de Vries, 2019).

3.5.4 Population

Population refers to all elements, objects, individuals, substances or events in their entirety that are of interest to the researcher and meet the criteria for inclusion (Brink, Van der Walt & Rensburg, 2012). Population is a complete set of people or subjects with a specialised set of characteristics (Polit & Beck, 2008) and a sample representing the entire population is drawn from the accessible population (Brink et al., 2012). The population consisted of approximately 641 nurses employed at 31 PHC facilities (eight operated by City of Cape Town and twenty-three by the Department of Health) who agreed to participate in this study.

Inclusion criteria

The enrolled nursing assistants, enrolled nurses and registered nurses who were not working in the mental health room were included in the study because they were caring for patients with medical conditions and those with mental disorders. The level of their mental health knowledge, their beliefs and attitudes towards people with mental disorders could be assessed to establish the intervention needs in mental health knowledge towards reducing mental health stigma.

Exclusion criteria

- Nurses employed in maternity obstetric units were excluded as they deal with pregnant mothers. They might not have observed PHC nurses' attitudes towards different types of mental disorders because they are not often exposed to the people with mental disorders who seek mental health care such as follow-up at the PHC facilities.
- Nurses working in the baby clinics were excluded as they care for babies and children and are not expected to treat people with mental disorders.
- Agency nurses working at PHC facilities were excluded from this study to prevent dual participation as they could move from one facility to another.

- Nursing students placed at PHC facilities were excluded as this study targeted practicing nurses.

- Allied health care professionals and multidisciplinary team members who were not nurses were excluded from this study.

3.5.5 Sampling and sample

This section presents the sampling method and sample used in this study.

3.5.5.1 Sampling

Sampling is defined as a selection process of subjects which will constitute a sample and represent the population of interest to the researcher (Brink et al., 2012). A sampling frame is defined as a list of subjects that form the eligible population and from which a researcher will draw a sample (Taherdoost, 2016). In this study, the researcher had a list of nurses from each of 31 PHC facilities. There were 641 nurses, employed at the 31 PHC facilities, that would form the entire sampling frame. However, each PHC facility had its own sampling frame which varied from seven to 68 nurses.

3.5.5.2 Sampling techniques and sample size

Quantitative data collection from an entire population of interest to the researcher might not be feasible in some instances because it can be time consuming and expensive (Taherdoost, 2016; Sarker & AL-Muaalemi, 2022). Therefore, it is advisable for a researcher to choose an appropriate sampling technique either probability or non-probability sampling (Burns & Grove, 2011; Sarker & AL-Muaalemi, 2022).

In probability sampling techniques, every element of the population has an equal chance of forming a part of the sample unlikely in nonprobability sampling techniques (Burns & Grove, 2011). In this study, a simple random sampling which is the most common

probability sampling technique was applied to randomly select a sample from the sampling frame (Burns & Grove, 2011).

A sample refers to a subset drawn from the population so that it can represent the population (Acharya, Prakash, Saxena & Nigam, 2013). The sample size was calculated using Slovin's formula below (Yamane, 1967) from a total population (N) of 641 nurses employed at eligible PHC facilities by both the CoCT and the DoH:

$$ n = \frac{N}{1 + N(e^2)} \text{ , n= } \frac{641}{1 + 641(0.05 \times 0.05)} = 246.3 = 246 $$

where n is the desired sample size, N is the population size (641) and e (e = 0.05) is the level of precision. The formula assumes a 95% confidence level. Using this formula, the estimate of the sample size needed for the whole study is N=641: 1+641(0.05)^2 = 246.3= 246. Therefore, the sample size = 246. This sample size was calculated so that the researcher knew the maximum number of the participants needed to complete the questionnaire. Table 3.1 presents the sample size per health subdistrict based on the PHC facilities that agreed to participate.

Table 3.1: Sample size per health subdistrict

Subdistrict	Population (N)	Sample (n)	%
Eastern	13	5	2.0
Khayelitsha	34	13	5.3
Western	65	25	10.2
Mitchells Plain	78	30	12.2
Southern	89	34	13.8
Northern	100	38	15.5
Tygerberg	93	36	14.6
Klipfontein	169	65	26.4
Total	641	246	100

3.5.6 Instrument

The self-report questionnaire used in this study comprised four sections with 62 items in total (see Appendix 1). Those sections include Section A (nurses' demographic characteristics), Section B (nurses' mental health knowledge), Section C (nurses' beliefs), Section D (nurses' attitudes).

Section A includes eight questions related to participants' demographic characteristics: gender, age, marital status, level of education, nursing rank, and work experience. The demographic characteristics were needed for an investigation of the influence of the socio-demographic factors on mental health knowledge, beliefs, and attitudes.

To determine PHC nurses' basic mental health knowledge, the researcher used the "Mental Health Literacy Scale" (MHLS) instrument from O'Connor and Casey (2015). Permission to modify this instrument was granted (see Appendix 5). The original MHLS (O'Connor & Casey, 2015) consists of 35 questions (see Appendix 20). The following twenty-three questions from the MHLS were not used in this study for various reasons. Two questions

(Question 9 and 10) were applied to an Australian context, six questions (questions 14–19) were related to self-disclosure of mental disorders' symptoms and were not relevant to answer Objective 1.4.1 of this study. Six questions (questions 20, 21, 22, 24, 26 and 28) were useful to measure beliefs about mental disorders and people with mental disorders and the same questions were included in the "Community Attitudes toward the Mentally-Ill Scale" (CAMI). Nine questions (questions 25, 27, 29–35) were useful in measuring the general public's attitudes towards seeking professional help, attitudes towards mental disorders and people with mental disorders in the communities. Therefore, twelve questions were used in this study: eleven questions were used to measure PHC nurses' mental health knowledge, one question (Question 23 related to the avoidance of people with mental disorders) was included in the attitude questions (see Question D6) in Section D.

Section B consists of 20 questions with a 3-point Likert scale "disagree, uncertain, agree" associated with nurses' knowledge about mental health. Among these questions, thirteen were adapted from the MHLS questions (questions 1–8, questions 11, 12 and 13) of which two became four questions by modification. The additional seven questions included in Section B (see Appendix 1) were developed by the researcher based on items identified from the literature (Bjorkman et al., 2018; Modula & Ramukumba, 2018; Marangu et al., 2021).

To assess PHC nurses' beliefs and attitudes towards people with mental disorders, the CAMI scale from Taylor and Dear (1981) was modified and used with permission from the author (see Appendix 6). The CAMI (Taylor & Dear, 1981) consists of 40 questions (see Appendix 19). Twenty-eight questions from the CAMI were useful to measure the general public's attitudes towards people with mental disorders in the communities and were not relevant to this study. Therefore, eleven questions were relevant to measure PHC nurses' beliefs about people with mental disorders and one question was relevant to measure their attitudes towards people with mental disorders.

In comparison with the belief statements included in the "Beliefs Toward Mental Illness Scale" (Hirai & Clum, 2000), this researcher identified the similar belief statements included in the CAMI designed to measure attitudes. The "Beliefs Toward Mental Illness Scale" was not used because the authors could not be reached.

Section C includes 20 questions with a 5-point Likert scale 'strongly disagree', 'disagree', 'uncertain', 'agree', 'strongly agree' related to nurses' beliefs about mental disorders and people with mental disorders. In Section C, the questions on the list were numbered with an uppercase letter and a number, for example "C1" (see Appendix 1) matching with the CAMI questions on the list numbered with lowercase letters such as "gg" (see Appendix 19) as follows: Question C1 = gg, C2= dd, C3 = f, C4= ii, C5 = c, C6 = cc, C7 = g, C10 = u, C12 = y, C14 = q, C18 = a. Based on the literature (Kapungwe et al., 2011; Poggenpoel et al., 2011; Knaak et al., 2017; Al-Awadhi et al., 2017; Ghiasi & Singh, 2022), the researcher developed nine belief statements that were added to eleven CAMI statements to assess nurses' beliefs about mental disorders and people with mental disorders.

Section D was associated with nurses' attitudes towards people with mental disorders and comprised 14 questions with a 5-point Likert scale 'strongly disagree', disagree', 'uncertain', 'agree', 'strongly agree'. In Section D, the questions on the list numbered with uppercase letter plus a number such as "D1" (see Appendix 1). The question number D6 (see Section D) related to the avoidance of people with mental disorders was taken from MHLS (Question 24) matching with question "ll" from the CAMI. The other thirteen questions were developed based on the literature (Kapungwe et al., 2011; Knaak et al., 2017; Al-Awadhi et al., 2017).

English was used to complete the questionnaires as the participants had sufficient proficiency in English which is the language of academic instruction at the nursing schools.

3.5.7 Pre-test of instrument

The pre-test of instrument refers to a test that is done to detect any problems related to the understandability of the instrument content, vagueness, or other difficulties that the participants can encounter with instrument statements during the main data collection (Perneger, Courvoisier Hudelson & Gayet-Ageron, 2015). The pre-test can be conducted using five to fifteen participants (Perneger et al., 2015). In this study, a random sample of ten nurses from two PHC facilities, five nurses from each PHC facility were used for the pre-test of the self-report questionnaire. The researcher informed the ten participants that they would not participate in the main study and their information would not be published. The pre-test was conducted to ensure the validity and reliability of the self-report questionnaire. It also helped the researcher to determine the time the self-report questionnaire would take to complete, and to refine it if necessary.

3.5.8 Validity and reliability

This section presents the validity and reliability of the instrument.

3.5.8.1 Validity

In quantitative research, validity refers to "the extent to which a concept is measured with accuracy" (Heale & Twycross, 2015). It expresses the degree to which an instrument accurately measures what it intends to measure (Bolarinwa, 2015). In this study, measures have been taken to ensure content and face validity of the instrument.

Content validity

Content validity refers to the degree to which an instrument fully measures "the construct of interest" (Bolarinwa, 2015); meaning the degree to which an instrument measures what it is intended to measure (De Vaus, 2002). In ensuring content validity, the researcher checks whether the self-report questionnaire sufficiently covers the entire domain

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associated with the variables aligned with the objectives of the study (Polit & Beck, 2012; Heale & Twycross, 2015).

Given that the self-report questionnaire included modified statements, the researcher pre-tested its content validity to prevent the vagueness and ambiguity. The researcher ensured that the statements included in Sections A, B, C, and D of the self-report questionnaire were relevant to the demographic characteristics, mental health knowledge, beliefs and attitudes respectively and not anything irrelevant to the objectives of this study.

PHC nurses who completed the self-report questionnaire were requested to write down any ambiguous term or statements. Three nurses indicated that question C8 "People with mental disorders are aggressive" (see Appendix 1) preferred to choose the option "uncertain". The researcher did not adjust this question because the majority (seven participants) did not report any ambiguity about it and "uncertain" was one of the answer options in the questionnaire.

The content validity was assessed by an independent expert in the field. Moreover, an independent expert in the field who was involved in the content validity read the self-report questionnaire to ensure the content validity and recommended the use of the term 'people with mental disorders' instead of 'mental health care users'. The researcher accepted the comment and changed the term accordingly.

Face validity

The term face validity refers to the estimation of the degree to which a researcher determined the unambiguity and the clarity of the concepts included in the instrument towards the assessment of the construct (Bornstein, 2004). To ensure face validity, the researcher pre-tested the self-report questionnaire, and the participants had an opportunity to read it to ensure readability, understandability and wording of the statements (Moule &

Goodman, 2009). This allowed the researcher to exclude any vagueness or ambiguity of statements or concepts.

3.5.8.2 Reliability

Reliability refers to the repeated use of instrument, used on the same participants on different occasions, yielding the same results (De Vaus, 2002). In this study, the pre-test of instrument enhanced its reliability. The researcher used Cronbach's Alpha to test the reliability of the self-report questionnaire that was completed by the same participants on two occasions over a period of time, in expectation of achieving the same results (Babbie, 2010; Tappen, 2011). The internal consistency of the self-report questionnaire was tested using the Cronbach's alpha test that generated an acceptable value of 0. 80 for 'mental health knowledge' variable, 0.70 for 'beliefs' variable, 0.81 for 'attitudes' variable. An instrument with Cronbach's Alpha value of 0.70 is reliable and acceptable (Taber, 2018).

3.5.9 Data collection process

The researcher obtained ethics clearance letters from the Biomedical Ethics Committee of the University. Permission to conduct the study at PHC facilities was obtained from the City of Cape Town's Health Department and the Western Cape Government's Department of Health. The researcher also contacted the directors of the eight health subdistricts via emails and obtained permission to access 31 PHC facilities (8 CDC from CoCT and 23 CDC and CHC from the DoH) out of 47 PHC facilities. Furthermore, the researcher contacted the managers of PHC facilities, either telephonically or via emails, and explained the study to them. Arrangements were made to access the PHC nurses at a specified day and time.

The researcher went to each of the 31 PHC facilities during morning times before official working hours, during tea and lunch times, and after official working hours, and explained the study and participation therein to the nurses. The researcher used an alphabetic list to

randomly recruit nurses and targeted eight nurses per PHC facility. During recruitment, the researcher obtained the cell phone numbers and email addresses of those who agreed to participate. The researcher informed the facility manager, at each PHC facility, and the participants about the date, time and venue of data collection.

The researcher collected the data by himself during lunch breaks in order to prevent any interruption of health care services. However, certain participants indicated the time most convenient to them; morning times before official working hours and after work. The researcher distributed the questionnaires to the consenting participants and allowed them to ask questions related to the study. The completion of the questionnaires took approximately 20 minutes. The researcher collected the questionnaires together with the consent forms and assigned a number (code) to each participant's questionnaire for easy identification by the researcher and to ensure anonymity in reporting. The data collection across all eight health subdistricts lasted approximately 22 weeks as participants had to attend to an unexpected influx of patients and postpone completion of the questionnaires.

3.5.10 Data analysis

The researcher conducted a data cleaning process and developed a codebook for record-keeping purposes for the codes and numerical values of the variables. Data were captured into the Statistical Package for the Social Sciences (SPSS) software version 27 (Babbie, 2010) and numerical data were organised through the use of frequency distributions (Polit & Beck, 2012). The researcher analysed data with the help of a statistician.

Descriptive statistics were used to describe and summarise quantitative data namely nominal and categorical data related to nurses' demographic information; ordinal data associated with nurses' knowledge, beliefs and attitudes towards people with mental disorders (Burns & Grove, 2011). Univariate analysis was used in this study to look at one variable's patterns at a time by describing its frequency, percentage, mean and standard

deviation, rather than describing the relationships between the variables (Polit & Beck, 2012).

Bivariate analysis was used to check the relationship between two variables (Babbie, 2010). The Chi-square test was used to determine the association between socio-demographic factors and knowledge, beliefs, and attitudes. Independent Samples Mann-Whitney U Test was used to assess the relationships between prior exposure and mental health knowledge, and beliefs. Independent-Samples Kruskal-Wallis Test, a non-parametric test used to ascertain whether or not there is a statistically significant difference between the medians of more than independent samples, was employed to assess the beliefs of three categories of nurses: Registered Nurses (RNs), Enrolled Nurses (ENs) and Enrolled Nursing Assistants (ENAs) about people with mental disorders. Bloom's cut-off point of 80% was used to determine good knowledge (≥80%) (Kamacooko et al., 2021; Benedict, Steinberg, Claassen, Mofolo & Van Rooyen, 2022; Hasan et al., 2022).

In Section A, associated with the description of demographic information, the frequencies, percentages, means and standard deviations were used to analyse the age, gender, marital status, level of education, nursing rank and work experience.

In Section B, nurses' mental health knowledge was assessed using twenty items. The respondents were given the following answer options: 'disagree', 'uncertain', 'agree'. Items with which the respondent disagreed or was uncertain scored zero point because the respondent had poor knowledge and items with which the respondent agreed scored one point because the respondent had good knowledge. Mental health knowledge scores were categorised into: lack of knowledge, misinformed and knowledgeable. The total mental health knowledge score was calculated by adding the points obtained for each of the twenty items, thus a respondent who agreed with the twenty items obtained a score of 20/20 equal to 100%.

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The cut-off point was fixed at 80% and the respondent who agreed with sixteen items obtained a total score of 16 out of 20 equals to 80%. This means that these respondents had good knowledge while those who had a total score of less than 80% had poor knowledge. For discussion purposes and comparison of this study's findings with other studies' findings, the mental health knowledge scores were further categorised into good knowledge (knowledgeable) and poor knowledge (misinformed and lack of knowledge).

Section C included twenty items measuring nurses' beliefs about mental disorders, and people with mental disorders. The respondents were given the following answer options namely 'strongly disagree', 'disagree', 'uncertain', 'agree', 'strongly agree'. The options 'strongly disagree' and 'disagree' formed a cumulative score with a new label 'disagree' while the options 'agree' and 'strongly agree' formed a cumulative score with a new label 'agree'. Furthermore, Section C was converted to 3-point Likert scale namely, 'disagree', 'uncertain' and 'agree'. The score of one point reflected a correct answer with which the respondent disagreed indicating positive beliefs. Items which the respondent agreed with or was uncertain with, scored zero point because the respondent either had negative or neutral beliefs. Beliefs scores were categorised into negative and positive beliefs.

The researcher added the points obtained for each of the twenty items to calculate the total belief score. The respondent who disagreed with all the items scored 20/20 equal to 100%. The cut-off point was fixed at 80% and respondents who disagreed with sixteen items obtained a total score of 16 out of 20 or 80%. This score indicated that the majority of the respondents had positive beliefs, those who had a total score of less than 80% had negative beliefs. The mean scores were used to assess beliefs, high mean scores indicated high negative beliefs.

Section D consisted of fourteen items related to nurses' attitudes towards people with mental disorders. The respondents were given the following answer options namely

'strongly disagree', 'disagree', 'uncertain', 'agree', 'strongly agree'. The options 'strongly disagree' and 'disagree' formed a cumulative score with a new label 'disagree' while the options 'agree' and 'strongly agree' formed a cumulative score with a new label 'agree'. Furthermore, Section D had been converted to 3-point Likert scale namely, 'disagree', 'uncertain' and 'agree'.

The disagreement with an item showed that a respondent had a positive attitude and scored one point. Items with which the respondent agreed or was uncertain about scored zero point and indicated a negative attitude. The total score for attitudes was calculated by adding the points obtained for each of the fourteen items; the total attitudes score was 14/14 or 100%. The cut-off point for positive attitudes was fixed at 80%. Therefore, the respondents who agreed with twelve items obtained a total score of 12/14 slightly higher than 11.2/14 or 80%. However, the respondent who agreed with eleven items obtained a total score of 11/14 slightly lower than 11.2/14 (80%). In this regard, the respondents who scored 80% or more had positive attitudes while those who had a total score of less than 80% had negative attitudes. The high mean scores indicated high negative attitudes.

3.6 Phase one (step two): Qualitative study (Objective 1.5.4)

This section presents the qualitative research approach, qualitative exploratory design, qualitative descriptive design, research setting, population, sampling and sample, data collection, data analysis, and conclusion. The qualitative study was conducted under the first step of IR-D&D (Rothman &Thomas, 1994) model to identify, analyse and contextualise the mental health stigma phenomenon and its reduction.

3.6.1 Qualitative research approach

A qualitative research approach allows a researcher to explore and understand the meaning of the phenomenon from the participants' views, and to develop findings by applying inductive reasoning (Creswell & Creswell, 2018). From particular observations,

inductive reasoning allows a researcher to develop information (Polit & Beck, 2009) in which a bottom-up strategy is often employed (Borgstede & Scholz, 2021).

The constructivists believe that a qualitative research approach is the best in seeking to understand a specific phenomenon, using participants' answers, that helps to construct the meaning of the phenomenon (Creswell & Creswell, 2018). Leedy and Ormrod (2015) explained that a qualitative research approach allows a researcher to understand stigma from participants' in-depth opinions. In this study, a qualitative research approach allowed the researcher to seek participants' in-depth opinions about the understanding of mental health stigma.

3.6.2 Exploratory design

An exploratory design refers to a method that explores a problem of which the background is not known or there is a lack of information so that a researcher can gain a deep understanding of the problem from the participants' views (Polit & Beck, 2018). It is used to explore a phenomenon being studied (Vivek & Nanthagopan, 2021). In this study, an exploratory design was used to explore nurses' deep understanding of mental health stigma and how to reduce it (Brink & Wood, 1998).

3.6.3 Descriptive design

A descriptive design is used to describe participants' opinions and experiences (Doyle, McCabe, Keogh, Brady & McCann, 2020). Moreover, it allows the researcher to define, classify, or categorise a variable population or phenomena under investigation (Marczyk, DeMatteo & Festinger, 2010). In this study, a qualitative descriptive design was used to describe the demographic characteristics of the participants, mental health stigma and its reduction from the participants' point of view.

3.6.4 Research setting

The research settings used in the qualitative approach research were 31 PHC facilities employed in the quantitative approach research (see Section 3.5.8). In addition, seven 72-hour assessment units located in the district hospitals in Cape Town were included because the nurses employed in these units often care for people with mental disorders who have been referred from PHC facilities and, therefore, these nurses might have experience of mental health stigma. For the purpose of this study, a purposive sampling was used to select 14 PHC facilities. However, two out of seven 72-hour assessment units that agreed to participate were included in this study.

3.6.5 Population

The population of interest consisted of approximately 641 nurses working at 31 PHC facilities, used in the quantitative research approach (see Section 3.5.4), were also employed in the qualitative research approach. In addition, the population included nineteen nurses working at two 72-hour assessment psychiatric units.

Inclusion criteria

- All the categories of nurses namely ENAs, ENs and RNs who had experience in caring for people with mental disorders in the emergency rooms or mental health rooms and permanently employed at PHC facilities were included.
- Mental health nurses holding at least a diploma in advanced psychiatric nursing and permanently employed at 72-hour assessment units were also included.

Exclusion criteria

- Nurses employed in maternity obstetric units were excluded as they deal with pregnant mothers and did not observe negative attitudes towards various types of

http://etd.uwc.ac.za/

mental disorders at PHC facilities because they were not exposed to people with mental disorders who seek mental health care such as follow-ups.

- Nurses working in baby clinics were excluded as they were caring for children.

- Agency nurses working at PHC facilities or 72-hour assessment psychiatric units were excluded to prevent dual participation as they could have moved from one facility to another.

- Nursing students and advanced student nurses placed at PHC facilities, or 72-hour assessment psychiatric units were excluded from this study to prevent dual participation as they rotate through different PHC facilities or 72-hour assessment psychiatric units.

3.6.6 Purposive sampling and sample

3.6.6.1 Purposive sampling

Purposive sampling, also known as judgmental sampling, is a form of non-probability sampling method in which the researcher relies on his/her own judgement to select participants that are capable of providing rich information useful for the study (Bernard, 2013; Etikan & Bala, 2017). The purposive sampling was used to select 14 nurses: one nurse from each of eight PHC facilities operated by the DoH meaning one nurse from each of eight health sub districts, one nurse from each of four PHC facilities operated by the CoCT, and one nurse from each of two 72-hour assessment units.

3.6.6.2 Sample

Sample refers to a specific subset of the subjects that are selected by a researcher based on their characteristics allowing them to provide rich information relevant to the study (Andrade, 2021). A purposive sample is initially drawn from the population of interest and the final sample size is determined by data saturation (Etikan, Musa & Alkassim, 2016). In this study, the researcher planned to initially conduct individual interviews with a purposive

sample of 14 nurses (n=14), being 12 nurses from PHC facilities and two nurses from 72-hour assessment psychiatric units. One nurse was selected from each of the 12 PHC facilities and from each of two 72-hour assessment psychiatric units to gain opinions from nurses employed at different facilities. However, data saturation was expected to determine the final sample size of nurses (De Vos, Strydom, Fouche & Delport, 2005; Brink et al., 2012). The thirteenth and fourteenth participants did not present any new ideas, merely repeating what previous participants had already said. To ensure data saturation, the researcher interviewed four additional participants, two from the PHC facilities and two from 72-hour assessment psychiatric units. These additional participants all confirmed the data saturation and the final sample size was 18.

3.6.7 Semi-structured interview guide

Permission was obtained from Hanafiah and Van Bortel (2015) to adopt the intrument (see Appendix 3) to be used contextually. A semi-structured interview is defined as a set of written and clear questions that will be covered in a specific order during an interview (Bernard, 2013). A semi-structured interview guide consisting of two sections with fifteen questions was used (see Appendix 2). Section A comprised five questions related to the participants' demographic information. Section B consisted of 10 probing questions related to mental health stigma and reduction interventions in PHC facilities from nurses' point of view. The use of the probing questions depended on participants' answers and the need to further explore them.

3.6.8 Pre-test of instrument

A pre-test was conducted with five nurses employed at two PHC facilities to determine the clarity of the questions and the approximate time that individual interviews would take. Four participants indicated that the questions were clear; however, one participant indicated that the following question was too broad "What is stigma in mental illness?" Therefore, this

question was rephrased in the semi-structured interview guide as follows: "Explain the mental health stigma in the primary health care facility" (see Appendix 2). The participants were informed that they would not participate in the main data collection and their information would not be published. During the pre-test of instrument, the researcher acquired the skill of asking and probing the questions. The first interview was submitted to the supervisor of this study, an expert in conducting interviews, to ensure that the researcher asked the relevant questions and the researcher obtained a positive feedback from the supervisor. Thereafter, the researcher conducted other four pre-test interviews that were also submitted to the supervisor of this study for check. The researcher transcribed those five interviews and submitted them to the supervisor for check. The supervisor approved the quality of the transcriptions.

3.6.9 Data collection process

During visits preceding the completion of the questionnaires (see Section 3.5.8), the researcher recruited interview participants at PHC facilities and obtained their contact details. The researcher informed them that the date, time and venue for interviews would be communicated to them at a later date. One month before the interviews took place, the researcher contacted the managers of the two 72-hour assessment psychiatric units and requested permission to access their units to recruit participants. The researcher visited those units and recruited the interview participants, and agreed on the date and time of the interview. An interview venue was discussed and agreed with participants and the facility manager provided a comfortable venue at the PHC facility. However, the participants who were not available during their lunch breaks used their free time after work hours or on Saturdays for the interviews. A private and comfortable venue was arranged outside of the facility for these interviews. The venue was agreed by both the participants and the researcher to ensure privacy, avoid transport costs and be comfortable during the interviews.

On the day of data collection, the researcher contacted the participants to be interviewed to ensure his/her availability. On arrival at the venue, the researcher arranged the venue so that it was conducive to interviews and put a sign 'do not disturb' on the door. The researcher explained the study to each participant and the rights as research participants. The participants completed and signed an informed consent form and permission to make audio-recordings of the interviews was also obtained. The researcher personally conducted one-on-one interviews with the participants to ensure consistency in the interviewing process. All the participants were interviewed in English, which they were comfortable speaking in.

Probing questions were asked to encourage the participants to reflect, gather their thoughts and provide more information (Bernard, 2013). The silent probes used in this study consisted of quiet moments during which the researcher waited for the participants to continue speaking (Bernard, 2013). The researcher specifically avoided asking leading questions to ensure the confirmability of the findings, the researcher applied the reflexibility throughout the interviews.

In addition to recording the participants, the researcher took field notes throughout the interviews. Before the end of interview, the researcher asked each participant whether he/she had any additional information or questions. All the participants summarised what they had said and this confirmed their views about mental health stigma and reduction intervention. Polit and Beck (2008) said that the early analysis of qualitative data helps a researcher to refine the sample and data collection. The researcher engaged with data analysis throughout the interviews, which helped to improve the interviews and to include information missed from the first interview, and also helped to determine whether data saturation was reached or not.

3.6.10 Data analysis

The researcher followed six steps of qualitative analysis (Braun & Clarke, 2006). In the first step the researcher organised and prepared the data for analysis and became immersed in the data while listening to the audio-recordings of the interviews to check for audibility and completeness. Subsequently the researcher transcribed the recorded data verbatim. The second step consisted of reading and re-reading the transcribed data to understand their meaning and the essence of the data. ATLAS.ti 9 software program was used to explore the data in-depth, to create codes, form categories of related or similar concepts, elaborate patterns, and linkages between categories, by consistently contrasting, comparing between codes, concepts and categories. In the third step the researcher coded the data while reading them and breaking the written transcripts down into sub-parts (Burns & Grove, 2011). The researcher focused on the analysis of codes while grouping the different codes into overarching themes. Certain initial codes were combined to form the themes while others became subthemes.

In the fourth step the researcher reviewed and refined the themes and subthemes to ensure that what were identified as the themes and subthemes were strongly linked to the data, and the themes and subthemes were interconnected. The researcher compared the themes and subthemes that were developed with those themes and subthemes developed by an independent coder to cross-check the consistency of the coding process and interpretation of the content. The similar themes from both the researcher and independent coder, as well as the subthemes were then merged.

The supervisor of this study and an independent expert assisted with data analysis. The themes or subthemes were developed independently by the researcher and an independent coder. The themes or subthemes that were not similar were not discarded. Certain themes and subthemes that were developed, either by the researcher of this study

or by an independent coder, that were not similar were included in this study. In the fifth step, the researcher defined and renamed the themes and subthemes. This was the final refinement of themes and subthemes. The researcher determined the aspect of data under each theme and subtheme, and wrote a detailed analysis for each theme. The sixth step involved the discussion of the findings, the researcher wrote-up the report while including data extracts from the interviews in a coherent and concise manner within each theme.

3.6.11 Trustworthiness of qualitative data

Trustworthiness is defined as the degree of confidence that qualitative researchers have in their data, analysis, and interpretation to ensure the quality of the study (Polit & Beck, 2017). In this study, trustworthiness was ensured through credibility, transferability, dependability, confirmability, authenticity and reflexivity (Polit & Beck, 2017; Korstjens & Moser, 2018).

Credibility

Credibility is about the congruence of data and reality (Stahl & King, 2020). Credibility is described as the truth of the qualitative data, their interpretation and the truth of how they are represented by the researcher, the confidence in how well the findings address the objectives of the study (Polit & Beck, 2012). It determines whether the data initially collected from the participants were correctly interpreted and whether the study's findings are a believable representation of the data (Lincoln & Guba, 1985).

The credibility of this study was ensured by the pre-testing of interview guide, and the comments of peer researchers which were used to refine interview questions and ensure their contextual usefulness. Moreover, the researcher provided a detailed description of how the data would be collected and analysed. Interview recordings were kept for audit purposes. The credibility was ensured by the triangulation of the findings generated by data collected from the nurses employed at different settings.

Transferability

Transferability refers to the degree to which the qualitative study's findings can be transferred to other settings or contexts using other participants (Lincoln & Guba, 1985). The researcher ensured the transferability by interviewing participants recruited from sixteen different health facilities. The researcher gave a detailed description of the data collection process to allow the possible duplication of findings in other settings. Moreover, transferability was also ensured by data saturation and the use of purposive sampling that allowed data collection from participants of various cultural groups. Hence, the findings of this study are useful for other similar research settings (Polit & Beck, 2012).

Dependability

Dependability refers to the consistency in data similarities over conditions and time (Lincoln & Guba, 1985; Polit & Beck, 2012). In this study, the researcher used an independent coder and compared the codes from the independent coder with his own to ensure consistency in coding (Adler, 2022). The independent coder also checked the acceptability of the process and procedure followed in data collection (Polit & Beck, 2012). The researcher also ensured dependability through the prolonged engagement with the data, and discussions with the supervisor about the data collection process.

Confirmability

Confirmability refers to the degree to which the study's findings could be confirmed by other researchers while establishing whether the findings are based on participants' own words or narratives rather than the possible biases of the researcher (Lincoln & Guba, 1985). The researcher of this study ensured confirmability by sending the transcriptions to the participants to check whether these transcriptions reflected what they wanted to express in their interviews. This process refers to the member checking that was applied to ensure the accuracy of the data (Adler, 2022). It is crucial to allow the participants to view what they

have said in order to ensure that the data are acceptable and trustworthy (Iphofen & Tolich, 2018). The researcher also ensured confirmability by checking the data himself, and using peer researchers to check whether the data of this study support its general findings, conclusions, recommendations, and implications. An independent coder was used, and consensus was reached around the themes and subthemes.

Authenticity of the research

Authenticity refers to the extent to which a researcher indicates the accuracy of the findings in terms of reality (Polit & Beck, 2012; Elo et al., 2014). The researcher considered the authenticity by ensuring the credibility of the findings, filling the gaps in what is known about nurses' mental health knowledge, beliefs and attitudes towards people with mental disorders, and reducing mental health stigma. Authenticity was also applied by ensuring that this study was not a duplication of other studies.

Reflexivity in qualitative research

Reflexivity refers to a researcher's recognition of her/his role and influence of her/his experiences, beliefs or assumptions in the research process (Hadi & Closs, 2016). It also refers to the process of the researcher's self-reflection on her/his preferences, preconceived ideas and own biases that can impact on participant's interview answers (Lincoln & Guba, 1985). In this study, the researcher reflected on his awareness about observed mental health stigma and realised that it could influence the interviews that he conducted. To prevent biases, the researcher of this study, during the pre-test of interview guide, practiced asking open-ended questions and avoiding the use of leading questions. By applying the reflexibility in this study, the researcher ensured that the findings of the interviews reflected the interviewees' opinions rather than his opinions (Curtin & Fossey, 2007). The use of an independent coder prevented the influence of the researcher's knowledge and experience of mental health stigma impacting on the participants' opinions.

3.7 Phase two (Information gathering): Systematic review (Objective 1.5.5)

The systematic review (Phase two) was conducted under the second step of of the IR: D & D (Rothman &Thomas, 1994) model to gather the information on existing interventions used to reduce mental health stigma. Phase two presents an introduction, methods including the steps of a systematic review, data synthesis and reporting.

3.7.1 Introduction

A systematic review refers to a set of written sources that are relevant to the study's topic, these sources include, published and unpublished articles, textbooks, conference papers, dissertations, and so forth (Grove & Gray, 2019; Holly, Salmond & Saimbert, 2022). It refers to a comprehensive synthesis of literature that a researcher needs to structure to establish the best available research evidence to address the research objectives of the study under investigation (Pollock & Berge, 2018; Grove & Gray, 2019; Higgins et al., 2019; Holly et al., 2022). Moreover, it is about a review of existing studies through the use of explicit and rigorous methods (Polit & Beck, 2014; Gough, Oliver & Thomas, 2017).

Polit and Beck (2014) explained that conducting a systematic review is to integrate research evidences relevant to answer the research question. A meta-analysis focusing on quantitative studies (Polit & Beck, 2014; Grønmo, 2020; Holly et al., 2022) was used in this study. It allowed the researcher to gather information from quantitative studies that used questionnaires to measure the participants' changes in mental health knowledge, beliefs, and attitudes towards people with mental disorders.

3.7.2 Methods

A systematic review included randomised controlled trials, or quasi-experimental ones, one cohort (one group pre- and post-intervention) and cohort analytic (two groups pre- and post-intervention) protocols. The researcher followed the five steps for conducting a systematic review used by Khan, Kunz, Kleijnen and Antes (2011). PICO (population, intervention,

comparison, and outcome) shapes a review question used in the systematic review (Joanna Briggs Institute, 2014; Higgins et al., 2019). PICO provided a guide to examine the characteristics of studies for inclusion in this study (Joanna Briggs Institute, 2014). In this study, population (P) refers to the health care providers and the interventions (I) included educational intervention, contact intervention, a combination of educational and contact interventions, and protest intervention (Table 3.2). The comparison (C) was between the respondents' mental health knowledge, and their beliefs and attitudes before and after the intervention. The comparison was also between the outcomes of the control and intervention groups. The outcome (O) consisted of reducing health care providers' stigma towards people with mental disorders.

Table 3.2: PICO

Population (P)	Health care providers and health profession students
Intervention (I)	Education, contact, combination of educational and contact interventions, and protest intervention
Comparison (C) in quantitative research	The comparison of pre-and post-intervention in terms of knowledge, beliefs and attitudes of the participants. The comparison was between the outcomes of the control and intervention groups
Outcome (O)	Changes in health care providers' knowledge, beliefs and attitudes towards people with mental disorders

Steps of systematic review

Steps of a systematic review process vary among researchers. For example, the following steps were used (Gough et al., 2017; Pollock & Berge, 2018): the determination of the aim and clarification of the research methodology, finding relevant studies, data collection,

appraisal of the studies, synthesis of evidences, and interpretation of the findings. The following steps are used in a systematic review: planning the review, searching and selecting the relevant literature, assessing the selected literature (assessing relevance and quality), analysing and synthesising the relevant content of the selected literature (extracting the relevant content, summarising and comparing the content from the different articles, and synthesising the content), and writing the final review (Grønmo, 2020). In consistent with the steps described by Grønmo (2020), Khan et al. (2011) suggested the following steps: formulation of review question, identifying relevant literature, quality appraisal tool, summarising the evidence, and interpreting the findings. Table 3.3 summarises the five steps of a systematic review.

Table 3.3: Five steps of a systematic review

Steps	Activities
Step 1: Framing question for review	• Formulate a question based on PICO • Formulate a well-structured question • Formulate a focused question
Step 2: Identifying relevant literature	• Using the key terms and the selected databases • Finding and collecting the literature
Step 3: Assessing the quality of the literature	• Assessing relevance • Assessing quality
Step 4: Summarising the evidence	• Extracting the relevant content • Summarising and comparing the content from studies • Integrating and synthesising the content from studies
Step 5: Interpreting the findings	• Interpretation of the findings • Discussion of the findings

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1) Step 1: Systematic review question

Step one required the reviewers to formulate a systematic review question that focused on PICO (Joanna Briggs Institute, 2014; Higgins et al., 2019; Holly et al., 2022) as illustrated in Table 3.3. A researcher must ensure that a systematic review question is well-structured while framing it, and a systematic review is conducted to provide answers to a clear and focused research question (Khan et al., 2011). A systematic review question is often narrow, clear and focused on specific intervention and outcomes (Polit & Beck, 2014). The systematic review question was as follows: What are the interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment?

2) Step 2: Identifying relevant literature

Step two consists of identification of the primary studies addressing the systematic review questions, the researchers conducting the systematic reviews need to determine inclusive and exclusive criteria (Polit & Beck, 2014). A systematic review search needs to be carried out to identify relevant studies that address the systematic review question (Khan et al., 2011). This step describes the types of studies, search strategy, participants, and outcomes of this study (Polit & Beck, 2014).

Type of studies

The quantitative studies that have investigated mental health stigma reduction were included in this study. Moreover, quantitative studies used randomised controlled trials, or quasi-experimental ones, one cohort (one group pre- and post-intervention) and cohort analytic (two groups pre- and post-intervention) protocols were included. Based on the year 2008 in which the World Health Organisation (2008) recommended reduction of stigma towards people with mental disorders at PHC services, this study included studies written in English between 2008 and 2019, aimed at reducing stigma towards people with mental disorders. Khan et al. (2011) stated that it is crucial to define the selection criteria of the

studies. Studies relevant to the research question of this study were included. Therefore, the PICO model (Joanna Briggs Institute, 2014) was applied to the inclusion criteria.

Search strategy

The reviewers used seven electronic databases: CINAHL, Cochrane Library, ERIC, Google Scholar, MEDLINE, PsycARTICLES and PubMed. The Boolean search technique was used to create the following keywords: anti-stigma intervention, contact intervention, education intervention, protest intervention. The Boolean technique included the following synonyms: stigma mental disorder/ stigma mental illness and intervention. The phrase search technique was used to create the following keywords: approach to reduce stigma mental illness, interventions to reduce stigma, mental health awareness to reduce stigma, mental health care providers and stigma, mental health stigma reduction, reducing stigma towards people with mental illness.

Study selection

The researcher completed the search of the articles and used Endnote 20 software to sort them; then any duplicates were identified. The sequence order of article screening included the title and abstract and then full-text. The researcher and an independent reviewer applied the inclusion criteria based on PICO in this process. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement flow diagram (Moher et al., 2009) was used to present a search detail through the process of a systematic review. The details of the study selection are presented in Chapter six (Section 6.1.1).

Types of the participants

In the systematic review, the participants refer to the subjects employed in the primary studies, and that will be considered in the systematic review (Holly et al., 2022). This study included the health care providers working at health care facilities. Health care profession

students who participated in primary studies conducted in academic institutions and health care facilities were also included in the review.

Outcomes

The outcomes refer to the changes following the interventions, it is about the effect of intervention (Khan et al., 2011). In this study, the researcher considered the studies that showed the pre-test and post-test intervention outcome, and the intervention outcome of the control and intervention groups. The outcome could be either a positive change in mental health knowledge, positive change in beliefs and attitudes or a lack of change.

3) Step 3: Quality appraisal tool

The reviewers assessed the quality of the eligible studies. The quality assessment tool for quantitative studies developed by the Effective Public Health Practice Project (EPHPP) (1998) was used for quality assessment of these studies. This tool, is perceived as a generic and effective tool to evaluate intervention designs such as randomised controlled trials, pre- and post-intervention and case-control studies (Thomas, Ciliska, Dobbins & Micucci, 2004; Armijo-Olivo, Stiles, Hagen, Biondo & Cummings, 2012). The quality assessment tool for quantitative studies (see Appendix 17) was used to critically appraise the studies that met the eligibility criteria. This tool helped the reviewers to critically assess and rate the selection bias, study design, confounders, blinding, data collection methods, withdrawals and drop-outs. The global rating had three outcomes: a study could be strong if it did not have a weak rating, it was moderate if it had one weak rating while it was weak with two or more weak ratings. The eligible studies that were found to have moderate or strong ratings were included in this study.

4) Step 4: Summarising the evidence

Data extraction

Data extraction involves the use of a data extraction form that should be simple, this form is very useful in organisation of the information that is extracted from the studies included in the review (Uman, 2011). During data extraction, two reviewers briefly describe the types of data collected (Joanna Briggs Institute, 2014). In this study, the standardised data extraction tool (Munn, Tufanaru & Aromataris, 2014) was adapted and presented in table format (see Appendix 16) to integrate PICO criteria. The reviewers undertook the synthesis of findings based on PICO to ensure that the systematic review question was answered. This data extraction form was used to extract the data from selected quantitative studies, and two reviewers were involved to ensure the inter-rater reliability and prevent possible errors during data entry (Uman, 2011). The data extraction form included: Information related to author(s) of an article, publication year, country in which an article was published, title of an article, its aim, design, participants, intervention, comparison, and outcome.

Data analysis and synthesis

Data analysis was done through the process of screening, appraisal and data extraction. Guided by the PICO, the two reviewers analysed the studies that met the PICO criteria. They used the textual narrative synthesis to create the themes from the appraised studies and those themes were associated with the intervention outcomes.

Summarising the evidence

The reviewers summarised the findings and drew conclusions by reflecting on the methodology and the effect of the interventions on the participants' mental health knowledge, beliefs and attitudes towards people with mental disorders. The reviewers determined if there was a significant difference between the pre- and post-intervention findings.

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5) Step 5: Interpreting the findings

After the reviewers' conclusion on the findings, the systematic review's findings were interpreted. The evidences of the effectiveness of the interventions in reducing mental health stigma were explained.

3.8 Triangulation

Triangulation refers to a method that uses various sources and approaches to ensure the trustworthiness of study findings (Polit & Beck, 2014) and minimise the biases associated with the use of one method (Noble & Heale, 2019). In this study, a multi-method research approach (quantitative and qualitative studies, systematic review) was employed to ensure the accurate collection of data reflecting the truth about the problem under study (Moon, 2019) such as mental health stigma and its reduction. Thus, triangulation allowed the researcher to get enriched data (Maarouf, 2019; Grønmo, 2020). Data were collected from PHC nurses who completed the self-report questionnaire, and from nurses working in PHC facilities and 72-hour assessment units who were interviewed to gain an understanding of mental health stigma and its reduction. Data were also collected during the systematic review to gain information on the interventions used to reduce mental health stigma. The researcher identified the key findings from each study, compared them, and put together similar findings that were then used to design the protocol.

3.9 Phase three: Development of a protocol for PHC nurses to reduce stigma towards mental health care users (Objective 1.5.6)

3.9.1 Introduction

The findings from quantitative and qualitative studies (Phase one) and systematic review (Phase two) were used to develop the intervention protocol for PHC nurses to reduce stigma towards mental health care users. The researcher summarised the findings from quantitative and qualitative studies, and systematic review and these findings were used in

the adapted third step (design and development) of IR-D&D (Rothman &Thomas, 1994) to design the draft of the protocol. Phase three of this study dealt with Objective 1.4.6 "To develop intervention protocol for PHC nurses to reduce mental health stigma at PHC services". This phase includes the following sections: population, sampling, NGT, and implementation.

3.9.2 Population

3.9.2.1 Nominal group technique experts

The NGT experts were recruited from 31 facility managers and 24 mental health nurses working at 31 PHC facilities in the Cape Town metropole (see Section 3.5.4). The NGT experts were also recruited from the population of four district psychiatrists caring for people with mental disorders at PHC facilities. One mental health nurse with teaching experience in an academic and health institutions was purposively recruited.

Inclusion criteria

The selection of NGT experts was based on the following inclusion criteria:

1) The experts included RNs, with mental a health training background in the undergraduate programme and who were managers of PHC facilities, holding a diploma in primary health care.

2) The experts comprised RNs who were mental health nurses holding at least a diploma in advanced psychiatric nursing.

3) The experts also consisted of district psychiatrists, a medical doctor with a specialty in mental health qualified to assess a patient with physical or mental conditions.

Exclusion criteria

- PHC nurses who were not managers of PHC facilities or mental health nurses were excluded.

- Managers of PHC facilities who did not have at least a mental health training background in the undergraduate programme, were excluded.

- Psychiatrists who were not employed at the district level were excluded.

- Medical doctors employed at PHC facilities without mental health specialty, were excluded.

3.9.2.2 Sampling and samle

A purposive sampling technique was used to select the NGT participants who were knowledgeable about the phenomenon of interest (Bhardwaj, 2019), meaning mental health stigma and its reduction interventions. Samples size of six and ten experts for NGT1 and NGT2 were used respectively (Maguire, Garvey & Olasoji, 2022).

3.9.3 Nominal group technique

Nominal Group Technique (NGT) is a method that uses structured discussions within small group's members to reach a consensus (Mason et al., 2021). NGT was used in this study while following its five steps: introduction, silent generation of ideas, round robin fashion, group discussion, voting and ranking (Harvey & Holmes, 2012). These five steps were applied in the first and second NGT that were conducted. This section provides the process of the protocol development following the adapted step IR: D&D (Rothman &Thomas, 1994) model.

The researcher organised two NGTs: The first NGT was a face-to-face workshop that took place in a private and secured venue and the second NGT was online. In the first NGT, the researcher set up a U-shaped table and chairs in the venue, and a laptop and a projector were used to display the presentation. In addition a flip chart was set up at the open end of the U-shape.

The first NGT was attended by six participants out of the ten participants who were invited. The four absent participants sent apologies for not being able to attend the NGT. In the first

step of the NGT, the researcher presented the background of the study to the participants and explain the objective of the workshop. The researcher also presented the summary of findings from the three studies (phases one and two) and the draft protocol (Harvey & Holmes, 2012) and explained the activities included in each step of the NGT.

The second step of the NGT focused on the generation of ideas. The researcher explained to the participants that they had one hour to reflect on the draft protocol individually and were then requested to write their ideas in the booklets provided without talking to each other. Each participant reflected silently and then recorded his/her ideas in the booklet (Harvey & Holmes, 2012).

During the third step of the NGT, each participant provided her/his ideas in a round-robin fashion without discussion; the researcher recorded these ideas on a flipchart using each participant's own words (Harvey & Holmes, 2012). The fourth step consisted of clarification and discussion on individual ideas. Each participant was given an opportunity to present and expand on her/his ideas (Harvey & Holmes, 2012). This activity was done in a round-robin fashion to ensure that each participant had a turn at presenting their ideas. The researcher recorded the expanded ideas on the flipchart.

The fifth step of the NGT consisted of voting and ranking of the generated ideas (Harvey & Holmes, 2012). As the list of ideas were already recorded, the researcher asked the participants to vote the ideas by writing "Yes" to agree with the idea or writing "No" to disagree, the results of the voting were recorded by the researcher. At the end of the first NGT the researcher informed participants that there would be a second NGT.

The researcher used the voted ideas in the first NGT to refine the draft of the protocol which was then emailed to all the participants of the first NGT for the approval. The first NGT participants were invited to attend the second NGT and the researcher contacted four participants who had not attended the first NGT and invited them to attend the second NGT.

All the participants who were invited confirmed that they would attend the second NGT; eight of the ten participants suggested a virtual NGT.

The researcher emailed the refined draft of the protocol to the four participants who had not attended the first NGT for reading so that they could give their inputs during the second NGT. The researcher created a Google Meet link and shared it with the participants a day before the second NGT. All the participants confirmed that they had the access to the link. The workshop took place in the afternoon during the participants' free time and all the five NGT steps were applied during the second NGT, which lasted for three hours. The researcher closed the second workshop and informed the participants they would be sent the final protocol for approval. Based on the ideas generated in the second workshop, the researcher refined and finalised the protocol. The protocol was then sent to the participants who approved it. Thereafter, the researcher sent the protocol to the independent experts for validation.

3.10 Ethical considerations

All ethical aspects were considered throughout the study (Brink et al., 2012). Ethical clearance was obtained from the university's Biomedical Ethical Research Committee (BMREC), and permission to use the health facilities for the study was obtained from the Western Cape DoH and the Cape Town City Council. Three fundamental ethical principles namely the respect for persons, beneficence and justice were applied (Brink et al., 2012). These ethical principles are in line with human rights such a person's right to self-determination, his/her right to privacy, his/her right to anonymity and confidentiality, and the right to fair treatment and protection from harm and discomfort (Brink et al, 2012).

The principle of respect for the persons

The principle of respect for persons is associated with the autonomy of the prospective participants, meaning that they have the right to self-determination and freedom from

coercion (Brink et al., 2012; Polit & Beck, 2014). This principle is also related to the protection of individuals with diminished autonomy (Brink et al., 2012; Polit & Beck, 2014). This principle refers to the respect of the human dignity that includes the right to self-disclosure (Polit & Beck, 2014). In this study, the researcher explained to participants the purpose of the study and their rights to freely participate in it, refuse to participate, or withdraw from the study at any time without penalty or negative consequences. The researcher allowed participants to ask questions and each participant then freely signed the consent form (Babbie, 2020).

The principle of beneficence

The principle of beneficence consists of compliance with the well-being of the study participants in terms of ensuring the right to protection from harm and discomfort (Polit & Beck, 2014). The participants have the right to protection from emotional, physical, spiritual, social, economic and legal harm (Brink et al., 2012). In this study, the well-being of the participants was ensured throughout data collection by minimising risks. Participants were informed that in case of any emotional or psychological discomfort during their participation in this study, an appropriate referral would be made to a suitable pre-arranged professional for intervention. However, there was no harm reported by any participant during the course of the study.

The principle of justice

The principle of justice consists of the participants' right to fair treatment (Polit & Beck, 2014). Study requirements in terms of sampling of the participants should be based on equal opportunity for selection (Polit & Beck, 2014). The individuals who refuse to participate or withdraw their participation should be treated in the same way those who participated (Polit & Beck, 2014).

In this study, the researcher applied a simple random sampling in the survey and there was a fair selection process to comply with the principle of justice. Furthermore, the researcher did not promise the participants any rewards, incentives or money.

The right to privacy

The right to privacy prevents the intrusion into participants' personal lives and is related to participants' expectations that their personal information would be kept confidential (Polit & Beck, 2014). The violation of the right to privacy takes place when a researcher reveals the participants' identities and information to the public (Babbie, 2020). In this study, the right to privacy was ensured by the participants' right to anonymity and confidentiality. The participants completed the self-report questionnaires and were interviewed in a private venue to prevent other people from knowing that they had participated in the study. The information related to participants' identity was protected using codes to ensure their privacy.

Anonymity

The researcher ensured that readers of the study cannot link a specific participant's identity to the information or response that she/he provided (Polit & Beck, 2014; Babbie, 2020). In this study, the researcher ensured the anonymity of the participants by omitting their names from the questionnaires and semi-structured interview data, by using codes to protect their identities. During data dissemination and publication, the identification of the participants will be omitted.

Confidentiality

Confidentiality involves a researcher's pledge to prevent participants' information from being publicly disseminated in a way that exposes their identities (Polit & Beck, 2014). A researcher needs to prevent other people from accessing participant information (Polit & Beck, 2014) by keeping participants' identities, relevant documents, records and files in a

safe and lockable place (Babbie, 2010). In this study, the researcher explained to the participants that their information would be kept confidential. For the purposes of data storage and restricted access, and compliance with the Protection of Personal Information Act, participants' information was safely stored. The completed questionnaires and signed consent forms are safely kept and in a protected in a lockable cabinet. All electronic data and recordings are on a password-protected computer. The data will be kept for five years after which it will be destroyed by shredding the hard copies and deleting the soft copy from the computer.

3.11 Summary

A multi-method research approach was used in this study. A quantitative descriptive design allowed the researcher to describe and quantify data related to nurses' mental health knowledge, beliefs and attitudes. Qualitative exploratory and descriptive designs were applied to explore and describe nurses' understanding of mental health stigma and its reduction. The systematic review was conducted to inform the study about the effectiveness of existing interventions towards mental health stigma reduction.

The next chapter presents and discusses the findings from the quantitative study.
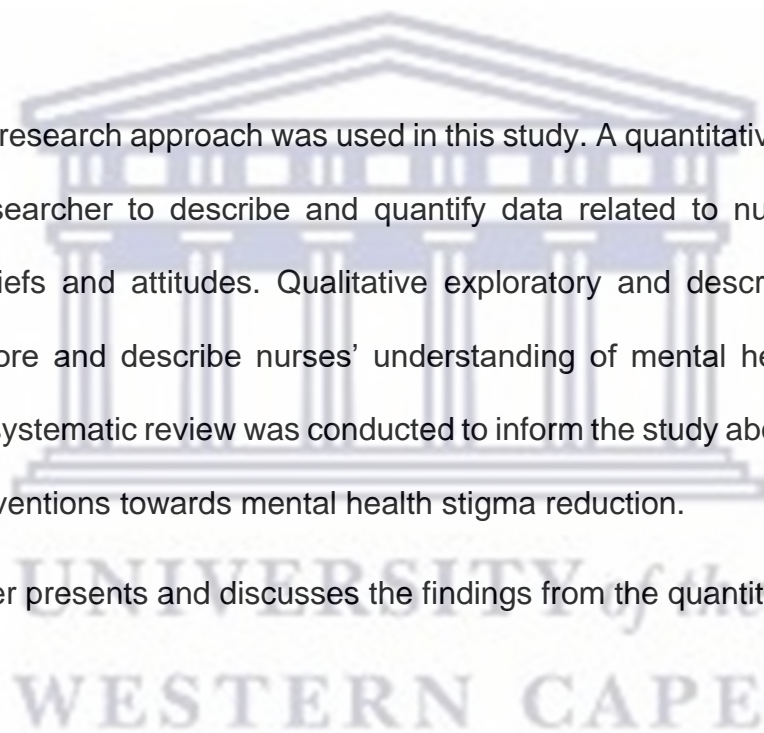
CHAPTER FOUR

PHASE ONE (STEP ONE): SURVEY RESULTS AND DISCUSSION

This chapter refers to step one of Phase one of the study and has two sections namely the presentation and discussion of the survey results.

4.1 Survey results presentation

This section presents the presentation of the survey results from the data collected from PHC nurse respondents using a self-report questionnaire.

4.1.1 Introduction

This section presents and describes the results obtained from 234 PHC nurse respondents employed at CHC and CDC in the Cape Town metropole. These results are related to sample realisation, socio-demographic characteristics of the respondents, knowledge of common mental disorders, beliefs and attitudes towards people with mental disorders. Towards its end, this section has the conclusion and the key findings.

This survey (Step one of Phase one) addressed the objectives below:

- To determine nurses' knowledge of common mental disorders.

- To assess nurses' beliefs about mental disorders and people with mental disorders.

- To determine attitudes among nurses caring for people with mental disorders in primary health care.

4.1.2 Sample realisation

Out of the 246 nurses who were invited to participate, 234 respondents completed the questionnaires (95.1 % response rate).

4.1.3 Socio-demographic characteristics

Most of the respondents were female (208, 88.9%). The majority of the respondents (81, 34.6%) were aged between 31–40 followed by the respondents aged between 41–50 (69, 29.5%). The respondents aged between 22–30 were 40 (17.1%) and the respondents aged between 51–60 were also 40 (17.1%). The minority were aged between 61–65 (4, 1.7%) years. The average age was 49.79 (sd 9.85) years with the youngest being 22 and the oldest 65 (median age 40 years). Over half of the 234 respondents were married or living together (123, 52.6%) with 111 (47.4%) being either single or divorced. Over one-third (94, 40.2%) had the certificate for Enrolled Nursing Assistants (ENAs) or Enrolled Nurses (ENs) and nearly two-thirds (140, 59.8%) were Registered Nurses (RNs) (Table 4.1). The respondents have worked in a PHC facility on average 7.7 years (sd 7.1) with the shortest being less than a year and the longest 37 years (median 5,5 years). Table 4.1 depicts the respondents' socio-demographic characteristics.
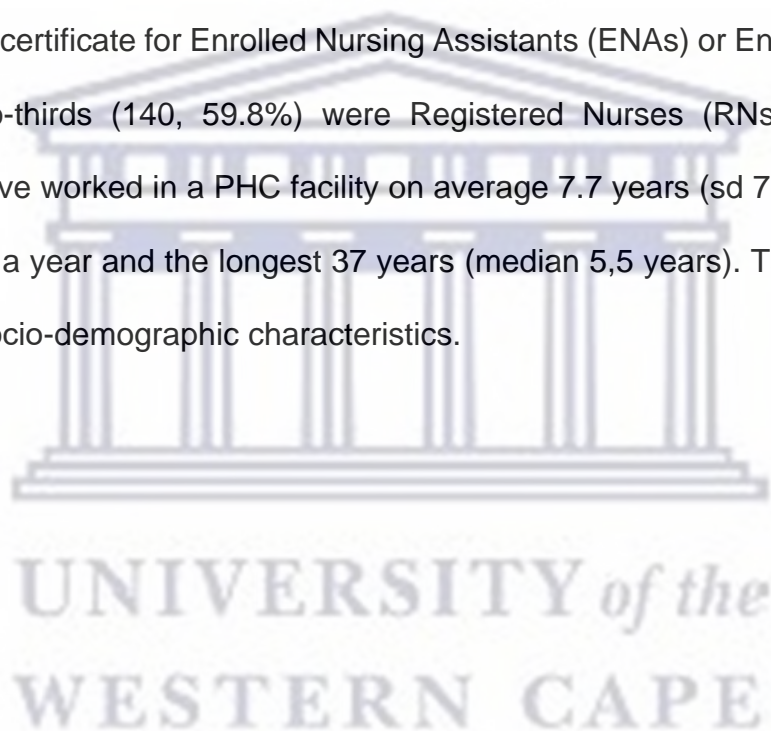
Table 4.1: Socio-demographic characteristics

Socio-demographic characteristics		n = 234	%
Gender	Male	26	11.1
	Female	208	88.9
Marital status	Single	81	34.6
	Married	112	47.9
	Divorced	26	11.1
	Widow	4	1.7
	Partner	11	4.7
Level of education	Certificate	91	38.9
	A four-year diploma	57	24.4
	A four-year Bachelor degree	71	30.3
	A Master's degree	3	1.3
	Other	12	5.1
Nursing rank	Enrolled nursing assistant	50	21.4
	Enrolled nurse	44	18.8
	Registered nurse	140	59.8

In assessing prior exposure and experience with people with mental disorders, 203 (86.8%) of the respondents indicated that they had attended to people with mental disorders at a PHC facility in the last year, and 199 (85.0%) had provided some care to people with mental disorders at a PHC facility over the last year.

4.1.4 Respondents' knowledge of common mental disorders

The respondents were asked twenty correct statements related to the definitions, signs and symptoms of common mental disorders. The respondents completed a self-report questionnaire with a 3-point Likert scale (disagree, uncertain, agree). If they got the answer correct, they were classified as knowledgeable; if they got the answer incorrect, they were classified as having a lack of knowledge. Providing no answer was classified as misinformed. However, for the final mental health knowledge score, correct answer scored

one point only. Items which the respondents disagreed with or were uncertain of, scored zero point. The researcher added the points obtained for each of the twenty items to calculate the total mental health knowledge score. The respondents who agreed with all the items scored 20/20 equal to 100%.

The respondents scored an average of 15.6/20 (78.0%) with the highest mental health knowledge score being 20 (100.0%) and the lowest 0/20. Out of the 234 respondents, 139 (59.4%) scored ≥80.0% and 95 (40.6%) scored <80.0%. In comparing the number of respondents who scored ≥ 80% (139, 59.4%) in each category, more RNs scored ≥80% compared to ENs and ENAs: 104 (74.3%) out of 140 RNs vs 18 (40.9%) out of 44 ENs vs 17 (34.0%) out of 50 ENAs (X^2 =32.5, p<.001). Similarly, when comparing the different nursing ranks, RNs had significantly higher recorded score than ENs and ENAs (17.0 vs 13.7 vs 13.4 out of 20 points respectively) (K=42.0. p=.001). Figure 4.1 presents mental health knowledge score per nursing ranks.
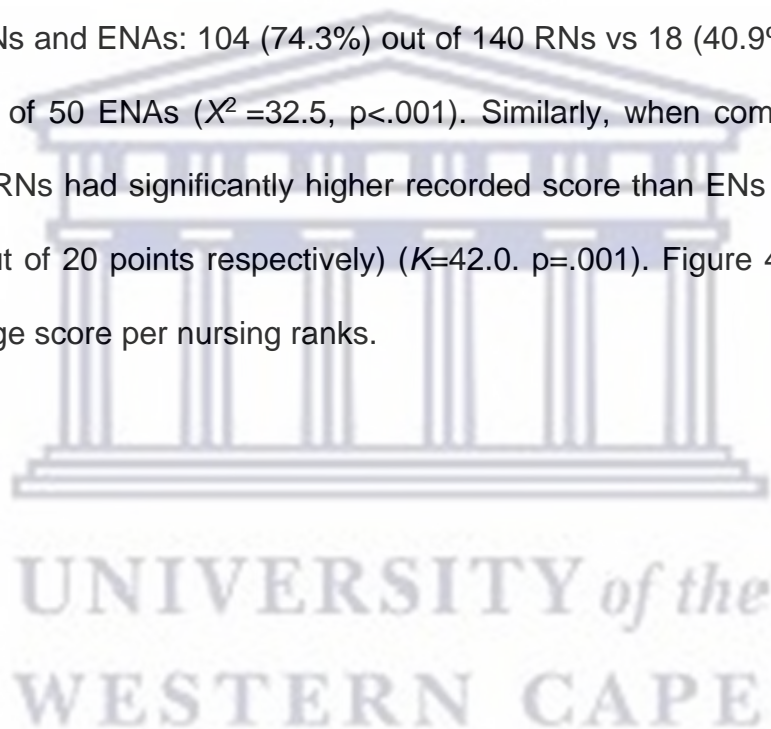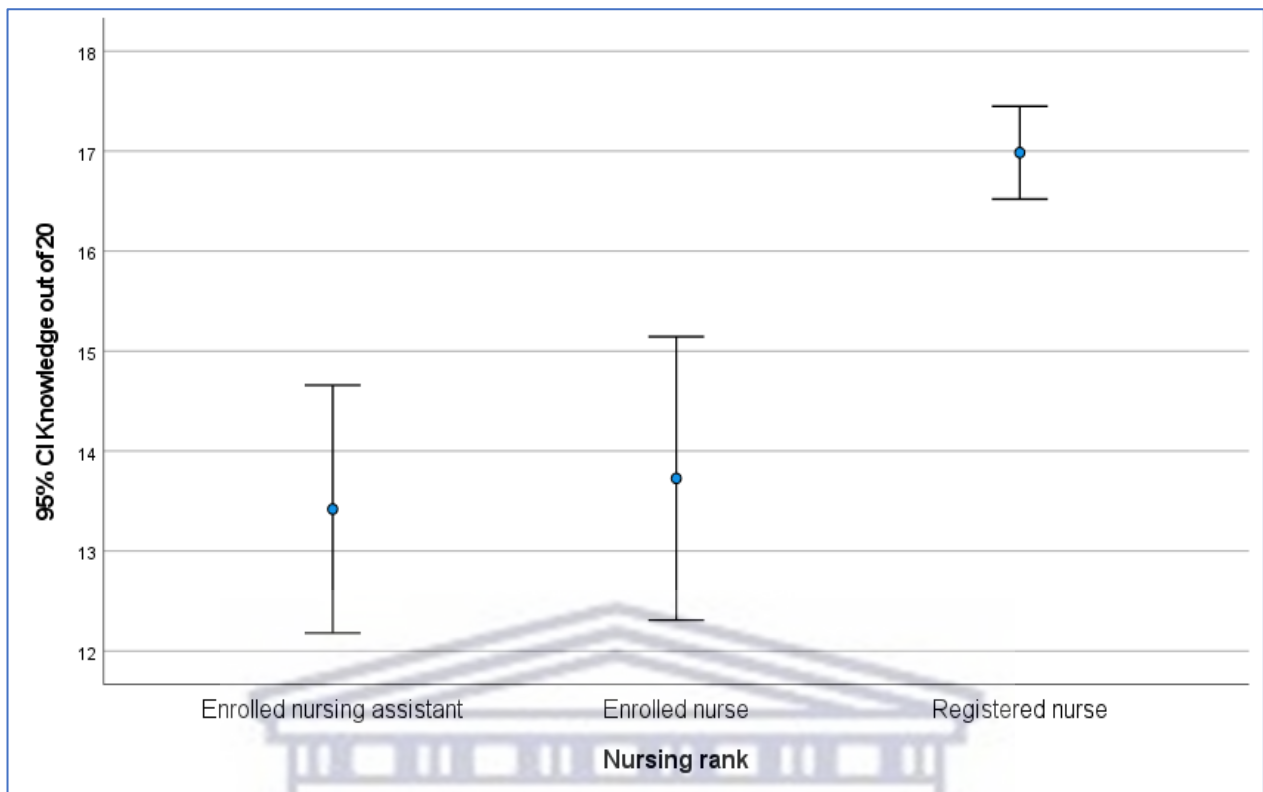
Figure 4.1: Mental health knowledge score and CI (out of 20)

No significant differences in mental health knowledge scores were found for gender and age differences. In assessing the influence of prior exposure to people with mental disorders, respondents with prior exposure recorded significantly higher mental health knowledge scores than the respondents who had not either attended (16.2 vs 12.3) or provided care (16.1 vs 13.0) for people with mental disorders (p<.001) (Table 4.2).

Table 4.2: Prior exposure and knowledge of common mental disorders

Item	Yes vs No (mean (sd)	Test
Have you attended to a patient with a mental disorder at a PHC facility over the last year?	16.2 (3.6) vs 12.3 (4.5)	*U*=4.1, p<.001
Have you provided care to a patient with a mental disorder at a PHC facility over the last year?	16.1 (3.6) vs 13.0 (4.7)	*U*=4.9, p<.001

U = Independent Samples Mann-Whitney U Test

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In assessing the knowledge of respondents, a high percentage of the respondents was knowledgeable with statements related to the definitions, signs and symptoms of common mental disorders (Table 4.3). More than 80.0% of the respondents correctly identified the symptoms of common mental disorders namely depression, dementia, bipolar disorder, schizophrenia, anxiety and substance use (Table 4.3).

The items with the highest level of misinformation was for a statement about dysthymia '*Dysthymia is a mental disorder known as persistent depressive disorder*' with 138 (59.0%) of the respondents who were uncertain of the definition. In addition, there appears to be misinformation on the statement related to the definition of the Cognitive Behavioural Therapy (Table 4.3) with 80 (34.2%) of the respondents who were uncertain of the definition and disagreeing with this statement.
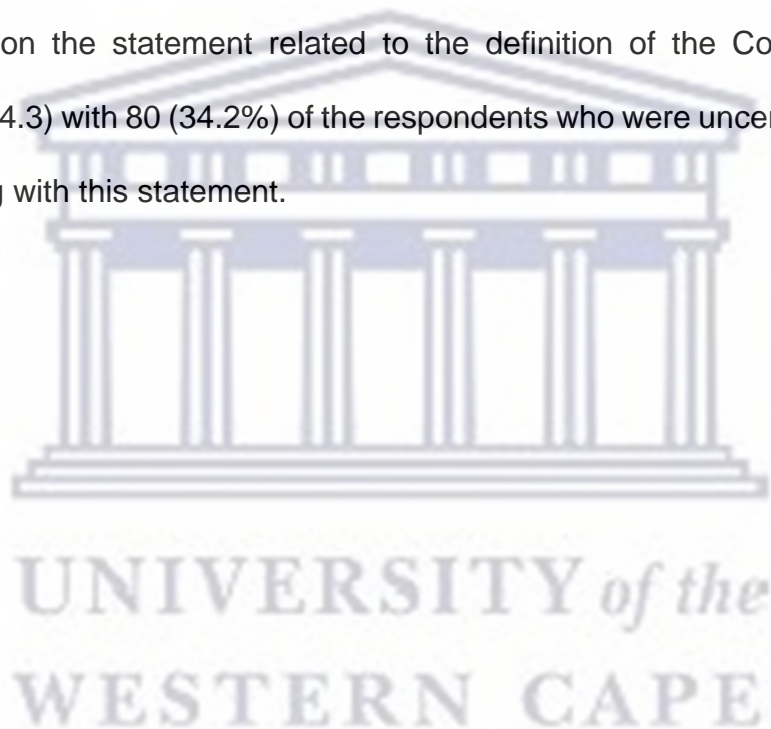
Table 4.3: Respondents' knowledge of common mental health disorders (n=234)

Knowledge item	Lack of knowledge n (%)	Misinformed n (%)	Knowledgeable n (%)
A person with depression experiences the symptoms such as loss of energy, feeling of worthlessness, sleeping trouble, poor concentration, feeling of hopelessness and difficulty making decisions.	3 (1.3)	10 (4.3)	221 (94.4)
A person with dementia suffers from a mental disorder in which progressive degeneration of the brain affects the memory, thinking, behaviour and emotion.	2 (0.9)	14 (6.0)	218 (93.2)
A person with bipolar disorder suffers from a mental disorder in which she/he experiences the periods of elevated (i.e., high) and periods of depressed (i.e., low) mood.	3 (1.3)	14 (6.0)	217 (92.7)
A person with depression suffers from a mental disorder in which she/he feels very sad, withdraws from the society.	11 (4.7)	9 (3.8)	214 (91.5)
A person with schizophrenia suffers from a mental disorder in which she/he experiences a different reality from that of the people around them.	5 (2.1)	16 (6.8)	213 (91.0)

Knowledge item	Lack of knowledge n (%)	Misinformed n (%)	Knowledgeable n (%)
A person with an anxiety disorder has feelings of uncertainty, discomfort, worry about the future, or tension that she/he experiences in response to an unknown object or situation.	7 (3.0)	18 (7.7)	209 (89.3)
A person suffers from drug dependence which is a substance use disorder in which she/he may experience withdrawal symptoms if the substance is withheld.	4 (1.7)	28 (12.0)	202 (86.3)
A person with substance intoxication suffers from a substance-induced disorder in which she/he experiences psychological alterations of consciousness due to recent substance consumption.	6 (2.6)	29 (12.4)	199 (85.0)
A person with a phobia experiences an excessive, unreasonable, and persistent fear triggered by a specific object or situation.	7 (3.0)	37 (15.8)	190 (81.2)
A person with a personality disorder suffers from a mental disorder which makes her/him think, feel, behave or relate to others very differently from the average person.	17 (7.3)	31 (13.2)	186 (79.5)
A person with a social anxiety disorder experiences an intense fear or anxiety about situations in which she/he may be under scrutiny of others, she/he fears negative evaluation by others.	8 (3.4)	41 (17.5)	185 (79.1)

Knowledge item	Lack of knowledge n (%)	Misinformed n (%)	Knowledgeable n (%)
Deliberate self-harm reported among the persons with mental disorders including depression is perceived as the behaviour that a person uses to cope with difficult or painful feelings.	12 (5.1)	46 (19.7)	176 (75.2)
A person with generalised anxiety disorder experiences and has difficulty to control persistent and excessive anxiety and worry about a number of events or activities such as work or social performance.	16 (6.8)	43 (18.4)	175 (74.8)
A person with eating disorder suffers from a mental disorder associated with severe disturbances in her/his eating behaviour.	28 (12.0)	33 (14.1)	173 (73.9)
A person with delirium suffers from an acute, reversible, temporary disorder in which he/he may experience reduced awareness of or contact with the surroundings.	14 (6.0)	49 (20.9)	171 (73.1)
A person with Alzheimer's disease can remember an event that happened long and the hallmark of this disease is the inability to form new memories.	25 (10.7)	40 (17.1)	169 (72.2)
A person with psychosis' mental capacity to recognize the reality, to remember, think, communicate with others, respond emotionally, and behave appropriately is diminished.	32 (13.7)	48 (20.5)	154 (65.8)

Knowledge item	Lack of knowledge n (%)	Misinformed n (%)	Knowledgeable n (%)
A person with agoraphobia experiences an abnormal fear of being in crowds, public places, or open areas.	13 (5.6)	71 (30.3)	150 (64.1)
Cognitive Behaviour Therapy is designed to treat a wide range of mental disorders including depression and is a therapy based on challenging negative thoughts and increasing helpful behaviours.	9 (3.8)	80 (34.2)	145 (62.0)
Dysthymia is a mental disorder known as persistent depressive disorder.	12 (5.1)	138 (59.0)	84 (35.9)
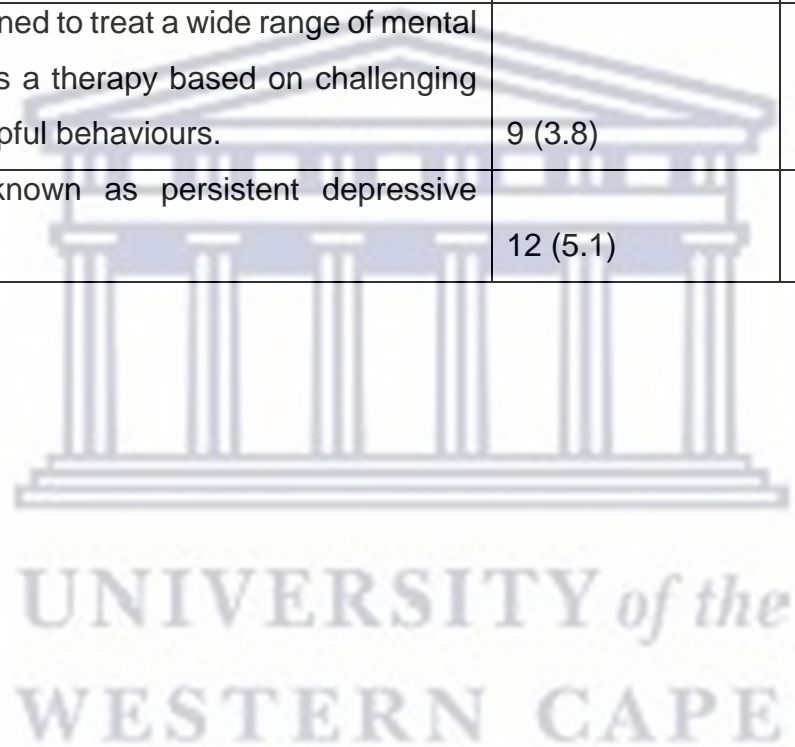
4.1.5 Beliefs about mental disorders and people with mental disorders

The respondents were asked twenty questions on beliefs about mental disorders and people with mental disorders. They completed a self-report questionnaire with a 5-point Likert scale: 'strongly disagree', 'disagree', 'uncertain', 'agree', 'strongly agree'. The disagreement/agreement options were further recategorised. The new option 'disagree' consisted of the combination of options 'strongly disagree' and 'disagree' and the new option 'agree' consisted of 'agree' and 'strongly agree'. Therefore, three options: 'Disagree', 'uncertain', 'agree' were used to assess the beliefs of respondents. The twenty statements consisted of negative beliefs.

The beliefs were categorised into three levels namely positive, neutral and negative (Jimoyiannis & Komis, 2007). The respondents who answered correctly by disagreeing with the statement were classified as having a positive belief; if they got the answer incorrect, they were classified as having a negative belief. Providing no answer was classified as having a neutral belief. The correct answer scored one point. Items which the respondents agreed with or was uncertain about, scored zero point. The researcher added the points obtained for each of the twenty items to calculate the total belief score. The respondents who disagreed with all the items scored 20/20 equal to 100%. Of the 234 respondents, 183 (78.2%) scored ≥80.0% and 51 (21.8%) scored <80.0%, this indicated that the majority of the respondents had positive beliefs.

High levels of agreement indicated strong support for a negative belief and an overall assumption of more negative beliefs about mental disorders and people with mental disorders. The average mean negative belief was 2.25/5 (sd 0.5) with significant differences between the nursing categories. The respondents' marital status and gender did not influence their beliefs. RNs had significantly lower negative beliefs scores compared to ENs and ENAs (2.12, sd 0.42 RNs vs 2.39 sd 0.43 ENs vs 2.46 sd 0.47 ENAs, (K=20,7, p<.001).

Figure 4.2 depicts the belief score per nursing rank. In assessing the influence of prior exposure to people with mental disorders, respondents with prior exposure had significantly lower belief scores than the respondents without exposure (2.2 sd 0.45 vs 2.5 sd 0.41, U=3.5, p<.00).
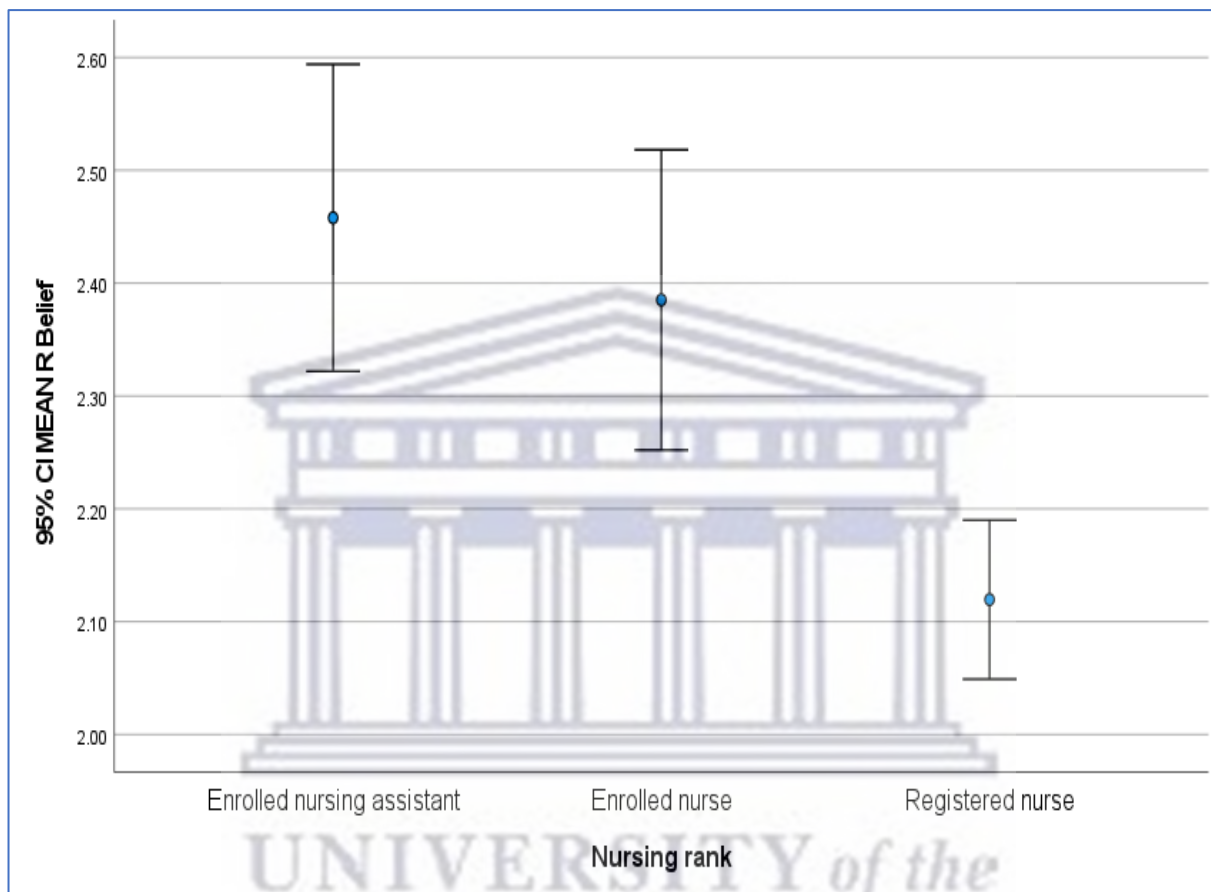
Figure 4.2: CI Mean belief score per nursing category

The highest level of disagreement (thus lowest negative belief) was for '*People with mental disorders don't deserve our sympathy'* with 223 (95.3%) of respondents disagreeing with this statement. This was followed by '*People with mental disorders should be isolated from the rest of the community'* (215, 91.9%) and '*People with mental disorders should not be given any responsibility'* (212, 90.6%) (Table 4.4). Of the 20 statements, more than 50.0% disagreed with 18 of the stated beliefs.

Table 4.4: Respondents' personal negative beliefs about people with mental disorders (n=234)

Negative belief item	Mean (sd)/5	Disagree n (%)	Uncertain n (%)	Agree n (%)
People with mental disorders are unpredictable.	3.4 (1.1)	59 (25.2)	41 (17.5)	134 (57.3)
People with mental disorders are far more of a danger than most people suppose.	3.3 (1.1)	71(30.3)	48 (20.5)	115 (49.1)
People with mental disorders should be denied their individual rights.	2.7 (1.5)	146 (62.4)	4 (1.7)	84 (35.9)
People with mental disorders are aggressive.	2.7 (1.1)	119 (50.9)	48 (20.5)	67 (28.6)
People with mental disorders are violent.	2.6 (1.0)	132 (56.4)	54 (23.1)	48 (20.5)
One of the main causes of mental disorder is a lack of self-discipline and will power.	2.4 (1.3)	150 (64.1)	21 (9.0)	63 (26.9)
People with mental disorders should be always treated in psychiatric units.	2.4 (1.0)	168 (71.8)	13 (5.6)	53 (22.6)
People with mental disorders are responsible for their mental health disorders.	2.4 (1.1)	148 (63.2)	39 (16.7)	47 (20.1)
People with mental disorders are untrustworthy.	2.4 (1.1)	148 (63.2)	43 (18.4)	43 (18.4)
A strange behaviour is not one of the characteristics of people with mental disorders.	2.3 (1.0)	174 (74.4)	18 (7.7)	42 (17.9)

Negative belief item	Mean (sd)/5	Disagree n (%)	Uncertain n (%)	Agree n (%)
People with mental disorders are a burden for caring.	2.3 (1.0)	157(67.1)	39 (16.7)	38 (16.2)
People with mental disorders are child-like.	2.3 (1.1)	165 (70.5)	34 (14.5)	35 (15.0)
People with mental disorders are a burden on society.	2.0 (0.9)	189 (80.8)	19 (8.1)	26 (11.1)
People with mental disorders don't have the same rights as the patients with medical conditions.	1.8 (0.9)	205 (87.6)	10 (4.3)	19 (8.1)
People with mental disorders are incompetent.	1.8 (1.0)	189 (80.8)	27 (11.5)	18 (7.7)
People with mental disorders must be kept behind locked doors.	1.8 (1.0)	206 (88)	12 (5.1)	16 (6.8)
People with mental disorders should be treated as outcasts of society.	1.7 (1.0)	207 (88.5)	13 (5.6)	14 (6.0)
People with mental disorders should be isolated from the rest of the community.	1.7 (0.8)	215 (91.9)	7 (3.0)	12 (5.1)
People with mental disorders should not be given any responsibility.	1.5 (0.8)	212 (90.6)	13 (5.6)	9 (3.8)
People with mental disorders don't deserve our sympathy.	1.4 (0.7)	223 (95.3)	4 (1.7)	7 (3.0)

High mean score = high negative beliefs

The high mean scores (Table 4.4 and Figure 4.3) were associated with the high negative beliefs about people with mental disorders. The highest level of agreement of respondents (134, 57.3%) with the highest mean negative belief score (3.4/5) was for '*People with mental disorders are unpredictable*'. This statement was followed by '*People with mental disorders are far more of a danger than most people suppose*' that was agreed with by 115 (49.1%) with the highest mean negative belief score (3.3/5) as illustrated by Table 4.4 and Figure 4.3. The mean negative belief score (2.7/5) of the respondents was associated with the statement '*People with mental disorders should be denied their individual rights'* and '*People with mental disorders are aggressive'* respectively. Figure 4.3 presents more details on the mean negative belief about other statements.

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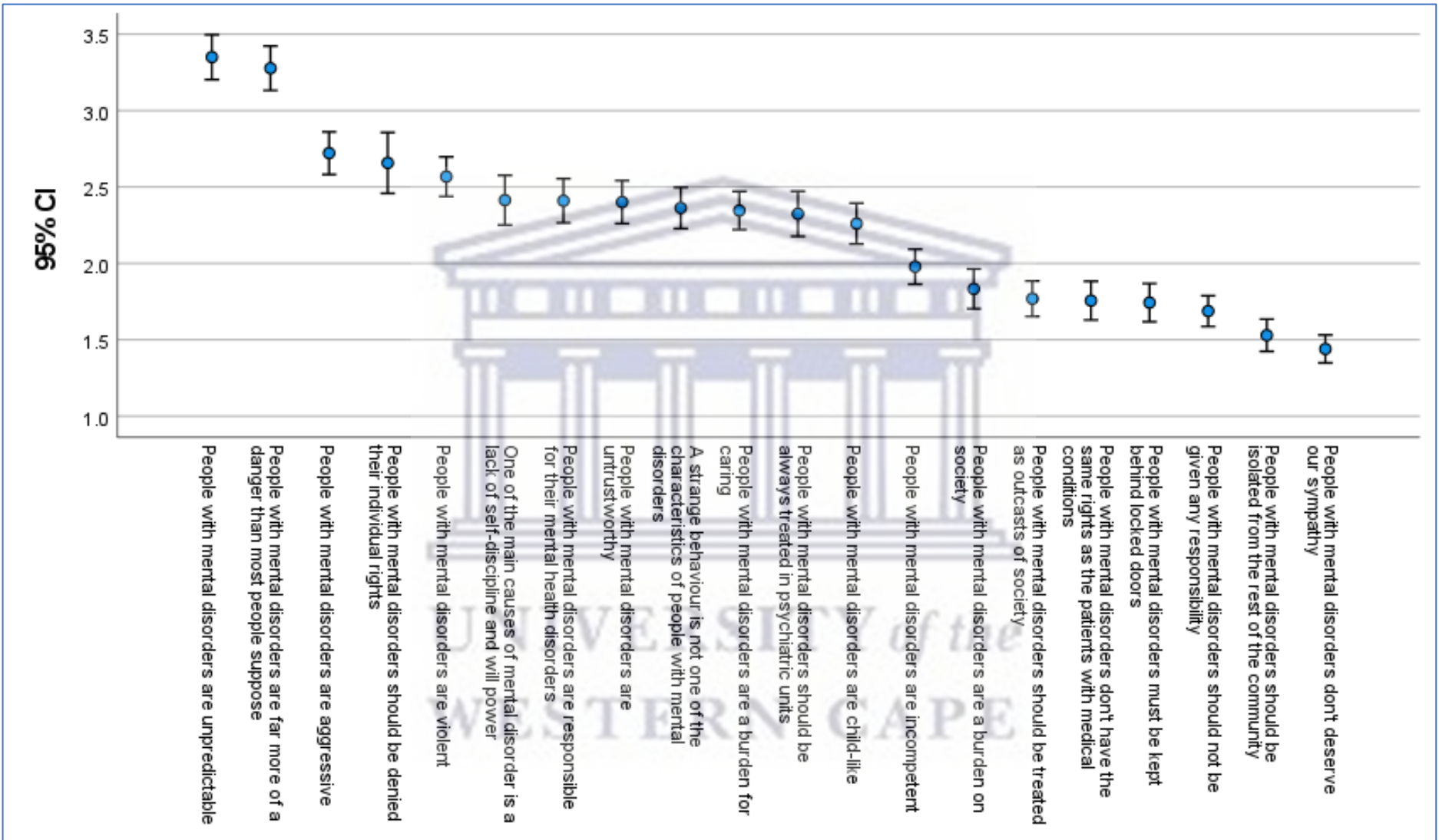
Figure 4.3: Belief items and 95% confidence intervals

4.1.6 Nurses' attitudes towards people with mental disorders

The respondents were given fourteen statements to indicate the attitudes towards people with mental disorders using a 5-point Likert scale: 'strongly disagree', 'disagree', 'uncertain', 'agree', 'strongly agree'. The disagreement/agreement options were further recategorised into the new option 'disagree' (combination of 'strongly disagree' and 'disagree') and 'agree' (Combination of 'agree' and 'strongly agree'). Therefore, three options: 'disagree', 'uncertain', 'agree' were used to assess nurses' attitudes (emotions and feelings, and behaviors).

Overall, less than half of the respondents agreed with any of the 14 attitudes items (Table 4.5) with an average agreement score of 2.2/5 (sd 0.7). There were no statistical differences between the demographic groups, nursing rank or prior exposure for respondents who had either attended or cared for people with mental disorders. The most common observed attitudes were '*Frustration that results from caring for people with mental disorders'* (98, 41.9% of respondents agreeing), followed by '*Fear of caring for people with mental disorders'* (86, 36.8% of respondents agreeing) and '*Anger caused by caring for people with mental disorders'* (51, 21.8% of respondents agreeing). The least common attitude observed was '*Chasing people with mental disorders from primary health care facility'* with only 12 respondents (5.1%) agreeing that they have observed this behaviour (Table 4.5).

Table 4.5: Respondents' attitudes towards people with mental disorders (n=234)

Negative attitude item	Mean (sd)/5	Agree n (%)	Uncertain n (%)	Disagree n (%)
Frustration that results from caring for people with mental disorders.	2.9 (1.1)	98 (41.9)	33 (14.1)	103 (44.0)
Fear of caring for people with mental disorders.	2.7 (1.2)	86 (36.8)	26 (11.1)	122 (52.1)
Anger caused by caring for people with mental disorders.	2.5 (1.0)	51 (21.8)	38 (16.2)	145 (62.0)
Reluctance to care for people with mental disorders.	2.5 (1.1)	56 (23.9)	34 (14.5)	144 (61.5)
Social distance from people with mental disorders.	2.5 (1.1)	59 (25.2)	28 (12.0)	147 (62.8)
Ignorance of complaints raised by people with mental disorders.	2.4 (1.1)	48 (20.5)	35 (15.0)	151 (64.5)
Avoidance of people with mental disorders.	2.3 (1.1)	55 (23.5)	17 (7.3)	162 (69.2)
Refusal to care for people with mental disorders.	2.1 (0.9)	27 (11.5)	21 (9.0)	186 (79.5)
Shouting at the people with mental disorders.	2.1 (1.0)	34 (14.5)	16 (6.8)	184 (78.6)
Naming and labelling people with mental disorders (calling them crazy, mad, and so on).	2.1 (1.2)	41 (17.5)	12 (5.1)	181 (77.4)
Swearing at the people with mental disorders.	1.9 (0.9)	18 (7.7)	16 (6.8)	200 (85.5)
Pushing people with mental disorders.	1.9 (0.8)	17 (7.3)	8 (3.4)	209 (89.3)
Beating people with mental disorders.	1.8 (0.8)	13 (5.6)	11 (4.7)	210 (89.7)
Chasing people with mental disorders from primary health care facility.	1.7 (0.8)	12 (5.1)	9 (3.8)	213 (91.0)

The high mean scores (Table 4.5 and Figure 4.4) were associated with the high negative attitude towards people with mental disorders. The highest mean attitude score (2.9/5) was for the agreement with the statement about '*Frustration that results from caring for people with mental disorders*' (Table 4.5 and Figure 4.4). The highest mean attitude score (2.7/5) was related to the agreement with statement about the '*Fear of caring for people with mental disorders*'. The highest mean attitude score (2.5/5) was related to the agreement with the following statements: '*Anger caused by caring for people with mental disorders',* '*reluctance to care for people with mental disorders', 'social distance from people with mental disorders'.* Figure 4.4 presents more results on attitude mean scores.
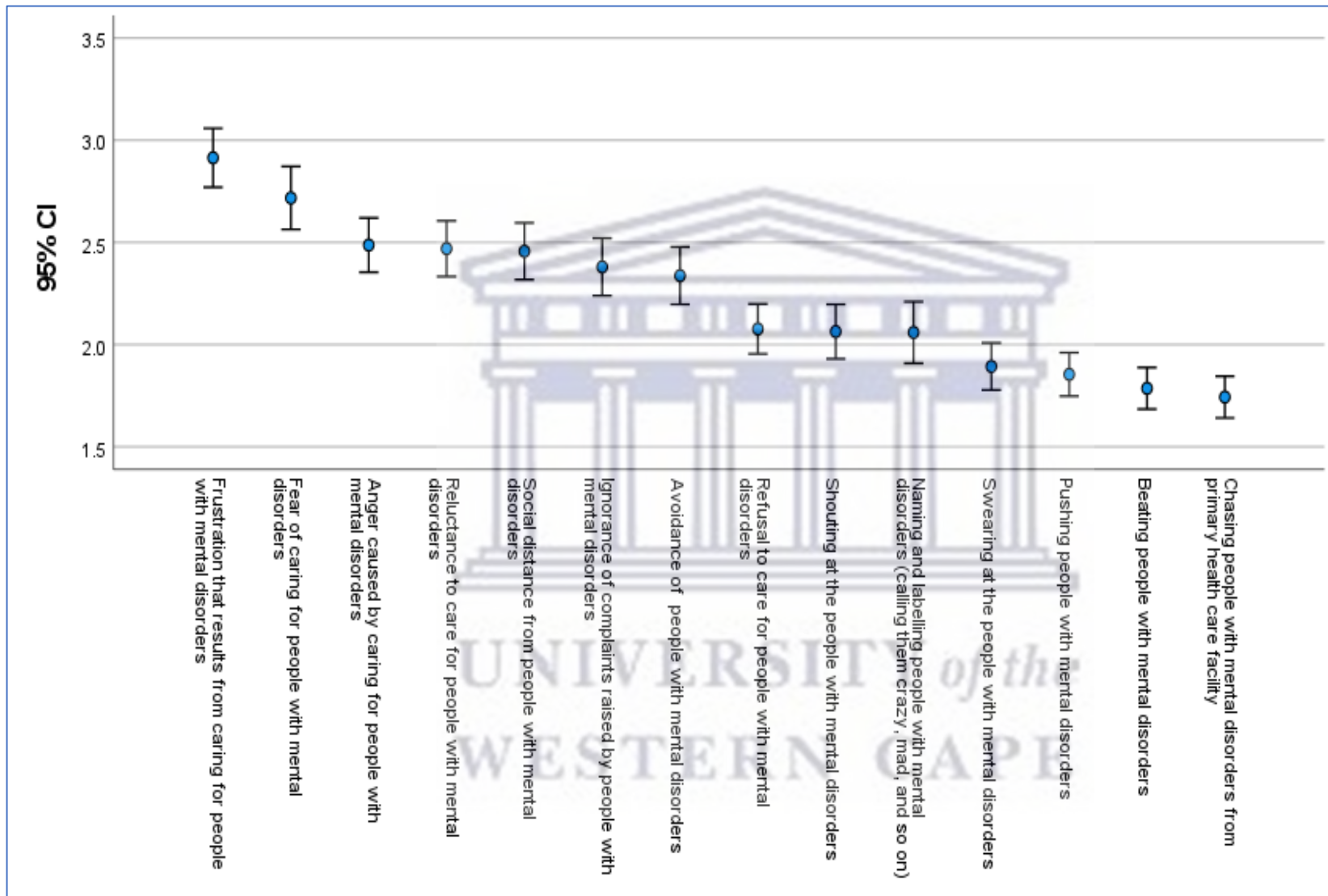
Figure 4.4: Attitudes scores and 95% confidence intervals

4.1.7 Key findings

PHC nurses' knowledge of common disorders

Nurses' high levels of knowledge of definitions and symptoms of common disorders such as depression, bipolar mood disorder, anxiety disorders, and schizophrenia were noted. However, low levels of knowledge of definitions of dysthymia and Cognitive Behaviour Therapy were documented. The tests showed that high levels of knowledge of definitions and symptoms of common mental disorders were associated with high levels of education (RNs had higher levels of mental health knowledge than ENs and ENAs). The respondents with prior exposure to people with mental disorders had significantly higher mental health knowledge scores than the respondents without exposure. Nurses' mental health knowledge was very superficial as it was limited to the definitions and symptoms of common mental disorders.

PHC nurses' beliefs about people with mental disorders

Positive beliefs were found among nurses who disagreed with the statements associated with negative belief. The high levels of positive beliefs among the respondents were noted. For instance, PHC nurses' positive beliefs were about the empathy, social integration and rights that people with mental disorders deserved. Negative beliefs were found among nurses with high levels of agreement with unpredictability, dangerousness and aggression of people with mental disorders. The tests showed that negative beliefs were associated with lower nursing ranks and a lack of exposure to people with mental disorders.

Nurses' attitudes towards people with mental disorders

The findings showed that PHC nurses' frustration caused by caring for people with mental disorders, fear and social distance were the most reported among negative attitudes.

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4.1.8 Conclusion

The findings of this study showed that more than half (139, 59.4%) of PHC nurses were knowledgeable about the definitions, signs and symptoms of common mental disorders. The findings also showed that the respondents' mental health knowledge mean score average (78.0%) was less than 80.0%; meaning that, in general, PHC nurses were not knowledgeable. The findings indicated that PHC nurses hold negative beliefs about the unpredictability, dangerousness and aggression of people with mental disorders. The findings reported PHC nurses' negative attitudes towards people with mental disorders namely frustration, fear and social isolation.

4.2 Discussion of results

4.2.1 Introduction

This section discusses the respondents' socio-demographic characteristics (gender, age, marital status, level of education and nursing rank, and work experience). It also discusses the respondents' knowledge of common mental disorders and their beliefs and attitudes towards people with mental disorders. This section ends with a conclusion.

4.2.2 Socio-demographic characteristics of the respondents

The socio-demographic characteristics include gender, age, marital status, level of education and nursing rank, and work experience.

4.2.2.1 Respondents' gender, age and marital status

The findings of this study showed that the majority (208, 88.9%) of the 234 respondents were female. It is evident that the nursing profession is predominantly female and perceived as a female profession at global level (Mulango, Atashili, Gaynes & Njim, 2018; Gandhi et al., 2019; Mao, Cheong, Van & Tam, 2021) and in South Africa (Winter, 2017; Kordom, Daniels & Chipps, 2023; Landu & Crowley, 2023). This is explained by the fact that many females have a natural and inherent capacity to care for others, and are often seen as compassionate and caring, and hence more attracted to the nursing profession. Regarding the age of the respondents, the findings of this study indicated that their age ranged from 22 to 65 years. Most (194, 82.9%) were aged between 31 and 65 years, which is consistent with the working age group in South Africa (Index mundi, 2020).

4.2.2.2 Level of education and nursing rank

The respondents were asked to indicate their highest level of education and their rank. An association exists between the level of education and nursing rank. In South Africa, as nurses successfully complete training they are awarded certificates, diplomas or degrees. Nursing colleges offer four-year diplomas, while schools of nursing at universities offer a four-year Bachelor of Nursing degree to students who successfully complete a four-year programme (Direko & Davhana-Maselesele, 2017). The SANC registers both forms of graduates as professional nurses (Direko & Davhana-Maselesele, 2017), also known as registered nurses or RNs. The findings of this study indicated that of the 234 respondents, 94 (40.2%) had a certificate, while 140 (59.8%) had completed a four-year nursing programme with either a four-year diploma or a bachelor's degree.

The perspective that RNs have a higher level of education than ENs and ENAs is associated with the scope of practice in South Africa (South African Nursing Council, 2021). Based on their nursing training and competence, the scope of practice determines the responsibility and accountability of each category of nurses, namely RNs, ENs and ENAs. The level of education of RNs thus allows this category to practice accordingly, and to supervise subordinates such as ENs and ENAs. In this study, most respondents were RNs (140, 59.8%), followed by ENAs (50, 21.4%) and ENs (44, 18.8%). It is perceived that the majority of the respondents were RNs due to the need for them in CHC and CDC in various areas and services such as the emergency rooms, tuberculosis treatment rooms, antiretroviral therapy rooms, consultation rooms, and so forth. A study conducted in KwaZulu-Natal, South Africa by Dube and Uys (2016) also found that the majority of PHC nurses were RNs.

4.2.2.3 Work experience

The findings indicated that 203 (86.8%) of the 234 respondents had attended to people with mental disorders at PHC facilities within the last year, while 199 (85.0%) provided other types of care to people with mental disorders at PHC facilities within the last year. These findings showed that the majority of PHC nurses were exposed to caring for people with mental disorders. Other studies have found that nurses' exposure to people with mental disorders while caring for them led to a positive change in negative beliefs and attitudes (Ihalainen-Tamlander et al., 2016; Al-Awadhi et al., 2017; Sahile et al., 2019). In South Africa, a similar study identified that PHC nurses' experience in caring for people with mental disorders contributed to a reduction in their negative beliefs and attitudes towards them (James, 2020).

4.2.3 Respondents' knowledge of common mental disorders

This study used Bloom's cut-off point of 80% to assess PHC nurses' levels of mental health knowledge. This cut-off point has previously been used in other studies to assess nurses' levels of knowledge globally (Ashebir, Yimer, Alle, Teshome, Teka & Wolde, 2022; Asemahagn, 2020; Akande, 2020) and in South Africa (Landu & Crowley, 2023).

In this study, 139 (59.4%) of the 234 PHC nurse respondents scored ≥ 80%, indicating that they were knowledgeable about the definitions, signs, and symptoms of common mental disorders. However, the knowledge level of nurses in this study was lower compared to findings in Australia, which identified 67.5% of PHC nurses as knowledgeable (Wearea et al., 2019), while in India 91.0% of PHC nurses were knowledgeable about risk factors for mental disorders (Gandhi et al., 2019).

The cut-off point employed in other studies to determine good mental health knowledge was lower than the level of 80% used in this study. A study carried out in India by Rajratan and Lakshmi (2017) used a cut-off point which ranged from 52.5% to 75% to determine good mental health knowledge among RNs, with a score of >75% indicating excellent mental health knowledge. Rajratan and Lakshmi's study (2017) showed that 26 (52.0%) of the 50 nurse respondents had good mental health knowledge, which is a lower score than the 59.4% found in this study which had a higher cut-off point. Consistent with the above findings, a study conducted in Ethiopia by Sahile et al. (2019) using 610 PHC nurses found that 368 (60.3%) were knowledgeable about mental disorders at a 69.2% cut-off score, this score being 10.8% lower than the 80% cut-off point in this study. A study carried out in Bangladesh by Mali, Akter and Arafat (2018) using 203 nurses showed that they had moderate knowledge of the signs and symptoms of depression; however, the cut-off score of knowledge was not determined.

The findings of this study showed that there was no association between the respondents' mental health knowledge scores and age (p=0.59), between mental health knowledge scores and gender (p=0.405), and between mental health knowledge scores and marital status (p=0.649). Similarly, a study carried out in Bangladesh by Mali et al. (2018) showed no significant differences between mental health knowledge scores and gender (p=0.09). In a study undertaken in Brunei, the findings indicated no significant differences between PHC nurses' mental health knowledge scores and their socio-demographic characteristics (Shahif et al., 2019).

In comparing the nursing ranks, the study established that there was a higher level of knowledge among RNs (104, 74.3%) than ENs (18, 40.9%) and ENAs (17, 34.0%). In this regard, there was a significant statistical difference in mental health knowledge

between the RNs, ENs and ENAs (p<0.001). This difference in mental health knowledge is associated with the levels of education among the different categories of nurses. Consistent with these findings, a study conducted in Australia found that nursing assistants had a lower level of mental health knowledge than RNs (Gerace, Muir-Cochrane, O'Kane, Couzner, Palmer & Thornton, 2018). An association between nursing qualification level and mental health knowledge was also documented in studies carried out in Malaysia (Eskandari, Abdullah, Zainal & Wong, 2017) and in Taiwan (Chen et al., 2018).

In a study undertaken in the USA, the mental health nurses' mental health knowledge scores were significantly higher than those of medical/surgical nurses ($P < 0.001$) (Kolb, Liu & Jackman, 2023). In South Africa, a study carried out in the Western Cape province found a significant statistical difference in mental health knowledge (p<0.05) between mental health nurses and non-mental health nurses (Cloete & Daniels, 2022). These findings indicate that the higher the level of nurses' education, the more knowledgeable they are about mental health disorders. In contrast to the above findings, a study conducted in Brunei by Shahif et al. (2019) found no statistically significant difference between mental health knowledge and level of education among 62 PHC nurse respondents; however, this could be due to the sample size used in that study.

In assessing the influence of prior exposure to people with mental disorders on nurses' mental health knowledge, the findings of this study showed that respondents with prior exposure had significantly higher mental health knowledge than those who had not provided care for people with mental disorders (p<0.001). Similarly, a significant difference (p<0.001) between mental health knowledge and nurses' length of working experience was noted in a study conducted in Taiwan (Chen et al., 2018). Consistent

with these findings, a study conducted in the USA found that nurses who had familiarity with people with mental disorders had significantly higher mental health knowledge scores ($P< 0.001$) (Kolb et al., 2023).

Based on Weiner's attributional theory (1985), that states that people desire to know the causes of a situation, nurses can acquire knowledge about the behaviour of people with mental disorders while caring for them. The acquisition of mental health knowledge leads to a positive change in nurses' negative beliefs and attitudes towards people with mental disorders. This change in negative beliefs is explained by Corrigan's cognitive stigma model (2000), that indicates that when people receive accurate information about people with mental disorders, this replaces their false beliefs. In contrast, no significant difference between nurses' mental health knowledge and work experience was found in a study conducted in India (Rajratan & Lakshmi, 2017; Gandhi et al., 2019).

4.2.4 Beliefs about people with mental disorders

Bloom's cut-off point of 80% was applied in this study to determine PHC nurses' levels of beliefs. The findings showed that the majority (183, 78.2%) of the 234 respondents scored ≥80%, indicating that they had positive beliefs about mental disorders and people with mental disorders. The highest level of disagreement (223, 95.3%) was reported regarding the statement '*People with mental disorders don't deserve our sympathy*', showing that most participants had sympathy towards people with mental disorders. Similarly, a study with nurses conducted in Nigeria by Coker, Coker, Alonge, Kanmodi (2018) reported that 90 (73%) of the 123 respondents believed that people with mental disorders deserve sympathy. Another study conducted with nurses in Australia by Weare et al. (2019) found that 68.4% of the respondents felt empathy towards people with mental disorders. In contrast, studies conducted in the USA (de

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Jacq, 2018) and Brunei (Shahif et al., 2019) found that nurses believed that people with mental disorders do not deserve sympathy. A similar study carried out in South Korea by Sim et al. (2020) found that nurses lost their empathy towards people with mental disorders.

In this study, 215 (91.9%) of respondents disagreed with the following statement '*People with mental disorders should be isolated from the rest of the community*', and this was the second highest level of disagreement. Another high level of disagreement was found regarding two other statements related to the isolation of people with mental disorders: 207 (88.5%) disagreed that '*People with mental disorders should be treated as outcasts of society*', and 206 (88%) disagreed that '*People with mental disorders must be kept behind locked doors*'. In contrast, a total of 81 (64%) of 126 PHC nurses in a study carried out in Rwanda by Baziga (2017) believed that people with mental disorders should be isolated from the rest of the community. Moreover, a study conducted in Nigeria by Coker et al. (2018) showed that the majority (82, 67.0%) of the 123 nurse respondents believed that people with mental disorders needed to be admitted. Similarly, the belief about the need for immediate hospitalisation of people with mental disorders was supported by 104 (49.5%) of 210 nurse respondents in India (Grover et al., 2020). The fact that nurses believe that people with mental disorders should be admitted to mental health institutions can be associated with the belief about the social isolation of people with mental disorders (Xanthopoulou, Mbanu, Chevalier, Webber & Giacco, 2022).

The fact that nurses believe that people with mental disorders are aggressive and dangerous (Brunero et al., 2017; Del Olmo-Romero et al., 2019; Zaraza-Moralesa et al., 2022) can contribute to their beliefs about the need for the isolation of people with mental disorders. A study conducted in Australia found that people with mental

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disorders are socially isolated because they are believed to be dangerous (Hall, Kakuma, Palmer, Minas, Martins & Kermode, 2019). These negative beliefs stem from a lack of information about mental health disorders (Gaiha, Salisbury, Koschorke, Raman & Petticrew, 2020). Corrigan's cognitive stigma model (2000) shows how nurses' negative beliefs can be triggered by the presence of a person with a mental disorder. These negative beliefs of nurses are based on inaccurate facts about people with mental disorders; mental health training can help them to acquire accurate knowledge that will contribute to the reduction of their negative beliefs. In this study, 115 (49.1%) believed that '*People with mental disorders are far more of a danger than most people suppose*'. The belief about people with mental disorders being dangerous was also noted among nurses in studies conducted in Spain, Portugal and Italy (Del Olmo-Romero et al., 2019) and in Nigeria (Jombo et al., 2019).

This belief about the danger of people with mental disorders is associated with the belief about them being unpredictable and aggressive. In this study, 134 (57.3%) respondents believed that people with mental disorders are unpredictable. Moreover, 48 (20.5%) respondents were uncertain about the aggressive behaviour of people with mental disorders, while 67 (28.6%) believed that they were aggressive. It can be concluded that nearly half (115, 49.1%) of the 234 respondents did not support the belief that people with mental disorders are not aggressive. The belief about people with mental disorders being unpredictable and aggressive was also found among nurses in studies conducted in Colombia (Zaraza-Moralesa et al., 2022) and the USA (Brunero et al., 2017).

In South Africa, people with mental disorders were perceived to be unpredictable by nurses in the North-West province (Ramalisa, du Plessis & Koen, 2018) and in Gauteng province (Baker & Naidu, 2021). In contrast, a study conducted in the Free

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State province by Damane (2018) showed that 67 (85.9%) of 79 nurses disagreed with the belief that people with mental disorders are unpredictable. The fact that the majority of respondents believed that people with mental disorders are not unpredictable is associated with their mental health training, as 68 (86.1%) reported that their nursing curricula included mental health topics.

In assessing the influence of nurses' socio-demographic characteristics on their beliefs, no significant differences were found between nurses' gender, age, marital status and their beliefs. In contrast, a study conducted in the KwaZulu-Natal province by Mntlangula, Khuzwayo and Taylor (2017) showed a statistically significant association between nurses' beliefs and their age. A study carried out in Turkey by Tambag (2018) showed a statistically significant association between a positive change in nursing students' negative beliefs and their age. The current study identified significant differences between nurses' beliefs and their nursing rank and level of education. This means that nurses with higher levels of education had lower levels of negative beliefs about people with mental disorders. This positive change in the negative beliefs of nurses with higher education can be explained by Corrigan's cognitive stigma model (2000), which demonstrates how accurate information on people with mental disorders replaces nurses' negative beliefs about people with mental disorders. In this instance, RNs who participated in this study had lower levels of negative beliefs than ENs and ENAs, because they received mental health training in their undergraduate nursing curricula.

Nurses caring for people with mental disorders gain more experience interacting with them, which can help to counteract stigmatising beliefs (Kolb et al., 2023). The findings of this study showed that there was a significant difference in beliefs between nurses who had prior exposure to people with mental disorders by attending to them or

providing them with care, than the nurses who had not had such exposure (p<0.00). This indicates that nurses with prior exposure had positive beliefs towards mental disorders compared to nurses who did not have any prior exposure.

4.2.5 Nurses' attitudes towards people with mental disorders

Fourteen items were used to measure the nurses' attitudes towards people with mental disorders. Respondents' disagreement with a statement implies positive attitudes. The findings of this study indicated that less than half (112, 47.9%) of the respondents had negative attitudes towards people with mental disorders. A total of 122 (52.1%) disagreed with all of the statements, meaning that PHC nurses' attitudes towards people with mental disorders were generally positive. Although each of the 14 statements reflecting negative attitudes was disagreed with by the majority (52.1%) of respondents, this might not be a true reflection of nurses' attitudes, as the disagreement might be associated with the protection of their personal image or that of the nursing profession.

The current findings demonstrated that the percentages of respondents who agreed with the 14 statements related to negative attitudes towards people with mental disorders varied from 41.9% to 5.1%. In this study, the common attitudes that were reported included nurses' frustration caused by caring for people with mental disorders, fear of them, and social distance from them. Similar attitudes were reported in several other studies (Gray & Brown, 2017; Beks et al., 2018; Sapag et al., 2018; Maconick et al., 2018; Kaba et al., 2020). These studies show evidence that certain nurses still do not want to work in direct contact with people with mental disorders because of the fear of being harmed; hence, nurses avoid them to prevent frustration and harm.

Of the 234 respondents, 98 (41.9%) reported that caring for people with mental disorders caused frustration, while 33 (14.1%) respondents were uncertain about this. It can be concluded that 131 (56.0%) respondents supported that frustration was caused by caring for people with mental disorders. Consistent with these findings, frustration caused by caring for people with mental disorders was noted among PHC nurses enrolled in a study conducted in Scotland (Gray & Brown, 2017). Similar frustration was noted among nurses employed in studies carried out in Australia (Beks et al., 2018; Zugai, Stein-Parbury & Roche, 2018). Similarly, nurses who participated in studies carried out in Sweden by Hammarström, Häggström, Devik and Hellzen (2019) and in Norway by Jansen et al. (2020) expressed their feeling of frustration caused by caring for people with mental disorders. The same feeling of frustration was found among 299 (75.5%) of 396 nurses who participated in a study conducted in KwaZulu-Natal in South Africa (Joubert & Bhagwan, 2018).

The findings of this study indicated that 86 (36.8%) respondents were fearful of people with mental disorders, while 112 (47.9%) did not have such fear. A similar fear of people with mental disorders was identified among nurses in several other studies (Beks et al., 2018; Fujii et al., 2018; Jansen et al., 2020; Mabala et al., 2019; Chou & Tseng, 2020; Johanna et al., 2022). A study conducted in Sweden showed that nurses were afraid of people with mental disorders, who were perceived to be unpredictable and dangerous (Johanna et al., 2022). Moreover, a study carried out in Taiwan by Chou and Tseng (2020) reported that nurses in the emergency department expressed their worries and fear of being attacked by people with mental disorders. In South Africa, new RNs who participated in a study conducted in Gauteng province by Mabala et al. (2019) expressed their feelings of fear, anxiety and nervousness while caring for

people with mental disorders. The fear of new RNs was probably due to their having had less exposure to people with mental disorders.

There is an association between nurses' beliefs about people with mental disorders being aggressive and their fear (Grover, Sharma & Mehra, 2020). This means that nurses' fear of people with mental disorders results from the belief about the aggression of people with mental disorders. As a result, nurses maintain social distance from people with mental disorders. In this study, social distance from people with mental disorders was noted among 59 (25.2%) of the 234 respondents, while 55 (23.5%) reported avoidance of people with mental disorders. Consistent with these findings, social distance from people with mental disorders was reported among nurses in studies undertaken in the USA (de Jacq, Norful & Larson, 2021), Portugal and Brazil (Nóbrega, Fernandes, Zerbetto, Sampaio, Carvalho & Chaves, 2021). Social distance from people with mental disorders was also reported among PHC nurses in South Africa (Maconick et al., 2018).

4.2.6 Summary

The nurses' level of education, their rank, and their prior exposure to people with mental disorders were significantly associated with their level of mental health knowledge. The current study has shown that more than half of the respondents were knowledgeable about the definitions, signs and symptoms of common mental disorders. However, it is concerning to find that more than one-third of nurse respondents were not knowledgeable, as PHC nurses are the first point of contact with people with mental disorders seeking care at PHC facilities. Most of the respondents had positive beliefs towards people with mental disorders; however, high levels of PHC nurses' negative beliefs were associated with people with mental disorders being seen as unpredictable. Negative beliefs about the dangerousness and aggression of people

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with mental disorders were also noted among PHC nurses. Regarding negative attitudes towards people with mental disorders, PHC nurses' frustration caused by caring for people with mental disorders, their fear of people with mental disorders and social distance from them were reported.

The next chapter presents the qualitative results and discussions.

CHAPTER FIVE

PHASE ONE (STEP TWO):

QUALITATIVE RESULTS PRESENTATION AND DISCUSSION

This chapter refers to step two of phase one and has two sections namely the presentation and discussion of the qualitative results.

5.1 Qualitative results

5.1.1 Introduction

This section presents the results related to the profile of the participants who were interviewed, themes and sub-themes, and it has a conclusion. This study addressed objective 1.4.4: to explore mental health stigma and its reduction intervention at PHC services among nurses working at PHC facilities.

5.1.2 Profile of the participants

Individual interviews were conducted with eighteen nurses, of whom fifteen were females, and three were males. The age of the participants ranged from 21 to 59. Fourteen participants were employed at PHC facilities, and four were mental health nurses working at 72-hour assessment psychiatric units. One of the fourteen PHC participants was an ENA and thirteen were RNs. Another four were mental health nurses and nine were non-mental health nurses. The non-mental health nurses had experience in caring for people with mental disorders in emergency rooms, preparation rooms and consultation rooms/offices.

5.1.3 Themes and sub-themes

The thematic analysis generated five themes and fifteen sub-themes (See Table 5.1 below).

http://etd.uwc.ac.za/

Table 5.1: Themes and sub-themes

Theoretical framework: Weiner's attributional theory (1985)/Corrigan's cognitive stigma model (2000)	THEMES	SUB-THEMES
Weiner's attributional theory (1985): people strive to determine the cause of a negative situation. People discriminate against people with mental disorders seen as the causes of their own mental disorders	1. People's negative perceptions of people with mental disorders	1.1: Social isolation of people with mental disorders
		1.2: People's belief about people with mental disorders are not the same like normal people
		1.3: Labelling of people with mental disorders
		1.4: People are not interested in understanding people with mental disorders
		1.5: Discrimination of people with mental disorders at health care facilities
Based on Corrigan's cognitive stigma model (2000): The behaviour of people with mental disorders can trigger the negative beliefs of people leading to negative attitude towards people with mental disorders	2. Factors affecting utilisation of mental health care services at PHC facilities	2.1: Behaviour of people with mental disorders influences staff reaction
		2.2: Health care providers are scared of people with mental disorders

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Theoretical framework: Weiner's attributional theory (1985)/Corrigan's cognitive stigma model (2000)	THEMES	SUB-THEMES
Based on Corrigan's cognitive stigma model (2000): Lack of mental health knowledge leads to negative attitude towards people with mental disorders. The behaviours of people with mental disorders can trigger the negative beliefs of people leading to negative attitude towards people with mental disorders	3. Perceptions of mental disorders and causes of stigma	3.1: Nurses' knowledge of different types of mental disorders that are at risk of stigma
		3.2. Lack of mental health knowledge causes stigma towards people with mental disorders
		3.3: Behaviour of people with mental disorders leads to stigma
	4. Nurses' negative perceptions attached to the geographical areas people with mental disorders come from	4.1: Geographical location associated with stigma of people with mental disorders (gangsterism, drug infested areas)
		4.2: Poor community areas are associated with stigma of people with mental disorders (poverty, poor knowledge and low education level, cultural beliefs, societal and family beliefs)
	5. Consequences of stigma on people with mental disorders	5.1: People with mental disorders default their treatment
		5.2: Social outcast of people with mental disorders
		5.3: Stigma triggers unwanted behaviour of people with mental disorders

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5.1.3.1 People's negative perceptions of people with mental disorders

The participants indicated that mental health stigma occurs when individuals perceive that people with mental disorders are not the same as other people. Moreover, the participants perceived that individuals' beliefs about people with mental disorders being harmful to themselves and others or being delinquent or bewitched constitute mental health stigma. Furthermore, the participants perceived that mental health stigma occurs when individuals believe that people with mental disorders are destructive and out of touch with reality. The participants also perceived that mental health stigma occurs when people with mental disorders at PHC facilities are not understood due to their mental disorders, therefore looked down upon, and, as a result, are treated with a lack of respect. The participants also viewed the PHC nurses' discriminatory behaviour, including the use of derogatory terms, towards people with mental disorders as a part of mental health stigma. The following is the extract from the participant's words:

"The stigma in mental illness is all the negative stereotypes and connotations that people have about those who are living with mental illnesses. You know, they call them crazy, or it's a certain group of people who get mental illness..., discriminating against them because they are living with mental illnesses. So, all the funny names: tik coop, za malletjies, you are mad, pambene; all those connotations that are attached to having mental health problems, people can't sit next to you" (P07).

People with mental disorders are isolated

The participants perceived that mental health stigma includes isolating people with mental disorders in the community or at PHC facilities. The participants explained how people with mental disorders are isolated in their communities. The participants also expressed that individuals do not want to associate with people with mental disorders and do not feel that people with mental disorders are a part of the community. The participants showed that

patients with other conditions at PHC facilities distance themselves from people with mental disorders due to fear. The participants also explained that nurses are reluctant to care for people with mental disorders, discriminate against them, avoid and chase them away, and feel that it is not their responsibility to care for them.

The participants pointed to the following perceptions of mental health stigma:

"... they don't want to be associated with them or they just don't want to do anything with them. They want to isolate mentally ill people because they don't understand what is happening in their minds or bodies" (P05).

"Definitely, patients are struggling to find work because they have this mental illness, they are struggling to get accommodation, they get chased away from their homes because the parents don't understand their mental illness" (P14).

"When you come across with them, you will not even listen to what she or he wants to say. The first thing to do is just to say "No, no, no, no! You were supposed to go in psychiatric unit or in psych department. Go to your sister" (P08).

People with mental disorders are not the same as other people

The participants were of the view that mental health stigma occurs when people with mental disorders are treated differently and seen as different from people with other conditions. The participants viewed that mental health stigma is associated with discrimination against people with mental disorders whose wards are not the same as those of other patients. For instance, the participants indicated that the gates of the mental health units are always locked, and the beds are different from those of the patients with other conditions. The participants also perceived that mental health stigma occurs when people with mental disorders at the PHC facilities are not viewed as normal. Moreover, the participants indicated that the beliefs of community members about people with mental disorders being unhuman constitute mental health stigma. In addition, the participants explained that

individuals' undermining attitudes and lack of respect towards people with mental disorders is a part of stigma. The following is an extract from a participant's interview:

"I don't know how to explain, something like dehumanising, something like that. You think that you can't treat them the way you treat other people that you perceive they are normal people ... So that's why I am saying it is dehumanising or treating them differently from the people you perceive as normal people" (P05).

People with mental disorders experience different forms of labelling

The participants who took part in the study viewed the labelling of people with mental disorders as a form of mental health stigma. They explained how individuals discriminate against people with mental disorders by labelling them with derogatory names in different languages such as English, Afrikaans and Xhosa. The derogatory names included mad, crazy, psych, psychotic, ligeza ('crazy' in Xhosa), malletjie ('crazy one' in Afrikaans), monsters and tik kop. The following extract from a participant's interview explains the use of derogatory names:

"Once you have been seen walking into mental health room they assume you are psychotic, you are sick, and they tend to exclude themselves from you, putting you aside ... 'Ezekeke' (those crazy ones), 'please attend your crazy patients', ... Even us nurses, it doesn't necessarily come from other patients, it comes from us nurses"(P09).

The participants explained that people with mental disorders are labelled with the names of mental health nurses' offices. For example, the participants said that nurses called any of the people with mental disorders room 1 patient, room 3 patient, room 17 patient and room 28 patient. Each one of the above rooms referred to the consultation office of a mental health nurse at a given PHC facility. The following participant's described it as follows:

"He is room 28 patient and he must go to room 28. So, that is stigma attached to this patient" (P18).

Furthermore, the participants explained that people with mental disorders are labelled by assigning them to a mental health nurse's surname or initial of her/his surname. For instance, they mentioned that nurses referred to people with mental disorders as K patient, Sister P patient, Mr H patient, Sister A patient and Mr L patient. The following participant's quotation bears evidence of this notion:

"... we will say 'K patients'. Sister K is our mental health sister. We will phrase like it's 'K patients" (P02).

The participants viewed that mental health stigma occurs when people with mental disorders are labelled dangerous. They explained that individuals believe that people with mental disorders can cause harm to themselves and others. Moreover, the participants expressed the view that individuals believe that people with mental disorders are aggressive and violent, thus causing fear. The quotations below explain individuals' beliefs about the aggression of people with mental disorders and fear-associated:

"... people don't want to be associated with them, they are scared that they will attack them, that's what I noticed. People are scared of them, especially other patients who don't want to sit next to them because there is something wrong with those patients" (P04).

"Most of the time, they say they will hurt them because they have aggressive behaviour, but not knowing that the aggressive behaviour is not always there. That's the main issue that they are saying that they will hurt them because they have aggressive behaviour and they are destructive" (P13).

The participants verbalised that individuals believe that people with mental disorders say incoherent and illogical things. Moreover, the participants mentioned that individuals believe that people with mental disorders cannot carry out the normal activities of daily living. The participants perceived these beliefs to be part of mental health stigma. The following quotations are the extracts from participants' interviews:

"... they are talking a lot of things that don't make sense" (P15).

"*When you are mentally ill, people think that you are incompetent to think for yourself, stupid if I can use the word. For me, it is actually sad to see that people are treated that way; being mentally ill does not mean that you are not able to use your brain properly" (P04).*

The participants viewed the association of people with mental disorders with demon-possession or witchcraft as a form of stigma. So, the participants indicated that people with mental disorders are labelled as being possessed by demons or bewitched. The following is a quote from a participant:

"It also involves social stigma. So, when they are being stigmatised, they are always attached with witchcraft, demons, devil spirits" (P16).

People with mental disorders are not understood

The participants verbalised that mental health stigma occurs when individuals do not want to understand what people with mental disorders are telling them. Moreover, the participants explained how certain nurses do not listen to what people with mental disorders say and do not attend to their needs, rather ignoring or even shouting at them. The participants described it as follows:

"… even if I am not there, for example, so the patient comes with mental health problems … the patient will be told to come back on the day that I will be at work, not hearing what the patient needs are at the moment … when you look at other health conditions within the community health centre, all other patients' needs will be seen and managed within the same day" (P14).

"… I am referring to the nurses, that is all the categories of the nurses. The moment they see the mentally ill patients, even if that patient is physically ill. They will just say "no, no, go, go to the mental health nurse" ... they will immediately try to get rid of you by saying or referring you straight to the mental health nurse" (P18).

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People with mental disorders are mistreated

The participants perceived that mistreatment of people with mental disorders constitutes mental health stigma. They explained that individuals undermine and do not respect people with mental disorders. Moreover, they stated that people with mental disorders suffer from verbal abuse and disrespect, and are laughed at. In addition, the participants explained that individuals make fun of, tease, and reject people with mental disorders. The following extracts from participants' interviews serve as evidence of mistreatment of people with mental disorders:

"Stigma in mental illness is when we are being discriminated, ill-treating people with mental illnesses ... They get beaten, they get made fun of, they are pulled by the children" (P16).

"...and sometimes they come in just for check-up, to fetch meds, and again they are chased out. "Yeah, you are mental health", even if you are coming for general medical conditions. You are pushed" (P17).

5.1.3.2 Theme 2: Factors affecting utilisation of mental health care services at PHC facilities

The participants indicated that the behaviour of people with mental disorders influences the reaction of PHC providers towards them. In this regard, the participants indicated that some PHC providers, including nurses, are scared of people with mental disorders.

The behaviour of people with mental disorders influences staff reaction

The participants showed that the behaviour of people with mental disorders impacts the reaction of PHC providers' reaction towards them. They reported that certain PHC nurses send people with mental disorders to the mental health office while shouting at them or using labelling terms. The following is the extract of the participant's interview:

"I am referring to the nurses; that is all the categories of the nurses. The moment they see mentally ill patients, even if that patient is physically ill, they will say, "No, no, go, go to the mental health nurse ... So, the health workers are frustrated because they don't understand these people…The quality of nursing care is not that good ... Even if the person is trying to explain why he is there, the person is not listened to…" (P18).

The participants also indicated that certain nurses fear people with mental disorders, viewing them as aggressive and thus causing a delay in care. One of the participants explained it as follow:

"It will depend on how the patient is because if the patient is too aggressive, we will also be scared, but if he is calm, then we will try to help the patient" (P06).

Staff are afraid of people with mental disorders

The participants indicated that nurses with mental health training might not be scared of people with mental disorders while nurses without experience fear them. The participants said the following:

"They become very scared; they keep their distance from the patient. They are scared of the patient" (P01).

"Some nurses would want to jump and run away, they don't want to be associated with them because they don't know how to speak to them, how to calm them down, because there are those nurses, I believe they have not been exposed to mental health studies" (P05).

5.1.3.3 Theme 3: Perceptions of mental disorders and causes of stigma

The participants pointed to the stigma around mental disorders as well as the possible causes.

Types of mental disorders and stigma

The participants explained that the following mental disorders are at risk of being more stigmatised than others: substance induced disorder, schizophrenia, bipolar mood disorder, psychosis and depression. The participants explained that the causes of stigma were related to their respective conditions and different behaviours that people with mental disorders manifest. They indicated that people diagnosed with substance induced disorder are at risk of being more stigmatised because people say that they used drugs and they are perceived to be responsible for their own condition. Participants indicated that people with schizophrenia are at risk of being stigmatised due to their strange behaviours and the fact that they talk to themselves. The following is a participant's quotation:

"…for example, people who are using drugs or alcohol; so, people tend to say "Yeah, he is like this because he chose to use drugs. He is like this because he chose to use excessive amount of alcohol... When it comes to schizophrenia, because schizophrenia people, you know, sometimes they tend to be violent, they tend to talk to themselves, and all that. So, that makes people look at them and laugh at them" (P18).

Stigmatising group's lack of mental health knowledge viewed as the cause of stigma towards mental disorders

The participants viewed the stigmatising group's lack of mental health knowledge as the cause of stigma towards people with mental disorders. They explained that individuals stigmatise people with mental disorders because they have insufficient mental health knowledge or are not informed about mental disorders. Moreover, they also mentioned that certain PHC nurses stigmatise people with mental disorders because they have lack of mental health training and their understanding of mental disorders is limited. Participants said:

"... like I said, the staff nurse … she is not educated on psychiatry" (P10).

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"I think the cause of stigma in mental illness is lack of education. What I mean by that, people are not well-informed of different illnesses and how to treat people equally" (P16).

The participants suggested interventions to reduce mental health stigma at PHC facilities through mental health training. They insisted on in-service mental health training for nurses at PHC facilities, such as in the morning. They also suggested that nurses should educate themselves about mental disorders and learn how to manage people with mental disorders who are aggressive. The participants also suggested that PHC providers should be educated on the types of mental disorders, the signs and symptoms of people with mental disorders, the causes and risk factors, and the stigma associated with mental disorders. It was suggested that a mental health manual can be used to train PHC nurses. The participants said the following:

"If they can make it, like at the facility, we don't have what we used to have when I was a young nurse … every morning we had in-service training … Ten-minute in-service training would be wonderful. And they can use our psychiatric nurses, our psychologists … Once a week it will be too much, once a month." (P04).

"I think, we, nurses in general, we just need to be educated about mental health, irrespective whether you work in mental health or not. We need to be educated ... As I said, maybe once a month … maybe for an hour to two hours, every nurse to be taught about mental health generally, how to treat the patient for mental illness" (P09).

The participants suggested that a PHC facility manager should support the mental health training of PHC staff. The participants indicated that a PHC facility manager should facilitate the integration of mental health care in all consultation offices/rooms instead of having one specific office/room for mental health care. The participants recommended that people with chronic mental disorders be part of the patients with chronic diseases. In addition, the participants suggested that the stickers used to label the folders of people with mental

disorders, for easy identification, should be removed because this type of labelling constitutes discrimination. One of the participants said:

 "*Firstly, not to identify and say that it is mental health sister's patient. The patient is a patient of the day hospital … and there must not be a specific area like room 17 where they know that the patient is going crazy or cookies in their mind because the patients are room 17 patients, they are sister A patients, A is a mental health sister ... The patients must be a part of chronic diseases or specialty services such as HIV*" (P11).

The participants indicated that certain managers of PHC facilities hold negative attitudes towards people with mental disorders and need mental health training. The following is an extract from a participant's interview:

"*I think they must also first look at their knowledge, their mentality towards mental illness. The managers in the clinics, I found even that they also have that fear of mental health care users*" (P15).

The participants indicated that a PHC facility manager should raise mental health awareness in the surrounding communities to reduce mental health stigma. The following is an extract from one of the participants:

"*We can have mental health awareness days where you also train the public, you give them information about mental illness … So, I think that there must be resources for raising awareness in the community, that is crucial*" (P15).

Behaviour of people with mental disorders seen as the cause of stigma towards mental disorders

The participants viewed the behaviour of people with mental disorders as the cause of mental health stigma. The participants stated that people with mental disorders who are subject to stigma are those who are born with mental disorders and do not have control

over their strange behaviour, illogical thoughts, and abnormal grooming behaviour. Moreover, the participants gave an example of people abusing drugs who are at risk of developing substance induced psychotic disorder and being stigmatised as individuals perceive them as the cause for their own condition. The following are the extracts from the participants' interviews:

"With schizophrenia,… because when they relapse, you can see because they don't wash, they are alone, they don't want to be among other people, they mostly talk to themselves, they neglect themselves, and they get aggressive at times and they can easily assault one another" (P03).

"... it's depression because if someone is depressed, they won't socialise, … they don't want to work, low energy" (P10).

5.1.3.4 Theme 4: Nurses' negative perceptions attached to geographical area people with mental disorders come from

Certain participants did not perceive any association between the geographical areas of people with mental disorders and mental health stigma. However, other participants indicated that there is an association between mental health stigma and poor communities in which people with mental disorders reside. Moreover, participants showed an association between mental health stigma and people with mental disorders, areas of gangsterism, and drug abuse. The participants explained that people with mental disorders from the abovementioned areas are stigmatised because they are considered as drug abusers, gang members or criminals. The participants stated that these areas influence mental health stigma. The following are the participants' words:

"BL is a poor community; when a patient is a mentally ill patient, they will say it is because of the drugs. If you move to the upper-class community, when they see a mentally ill patient, it is not due to drugs. "Shame! Something traumatic happened in his life" (P04).

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"Like I said, if you come from a more violent area, like LVD, for instance, it is already stigma. Either you are a gangster, a criminal, that is what the people perceive already" (P12).

Mental health stigma associated with the area of people with mental disorders depends on societal and family beliefs

The participants showed that mental health stigma is associated with the area of people with mental disorders and depends on the societal and family beliefs. The participants indicated that specific individuals think that mental disorders are hereditary, and if one family member has a mental disorder, the rest of his/her family member has the same disorder. Moreover, the participants showed that mental health stigma in the community depends on their level of education. It was elucidated that the socio-economic status of the community members and their understanding of mental disorders contribute to mental health stigma. They explained that a society's beliefs about mental disorders influence mental health stigma. The participant is quoted below:

"...if my brother has got schizophrenia, I won't have a boyfriend because the boyfriend might think if we have a child with a mental illness, also I have a psychotic disorder" (P11).

5.1.3.5 Theme 5: Consequences of stigma and mental health treatment

The participants indicated that mental health stigma causes people with mental disorders to terminate their treatment, to become outcasts, and adopt acting-out behaviours.

People with mental disorders terminate their treatment

The participants indicated that fear of mental health stigma causes people with mental disorders to terminate their treatment. They mentioned that people with mental disorders refuse to go to PHC facilities to collect their medication or go for check-ups because of the fear of stigma. One participant said:

"*Patients feel offended, patients feel misunderstood, patients feel that people see them as being monsters. So, it causes the patients not attend the clinic, and that causes an increase in default rate, it causes an increase in non-compliance and it causes an increase in re-admission*" (P11).

People with mental disorders become outcasts

The participants ascertained that mental health stigma leads people with mental disorders to become outcasts. They indicated that mental health stigma makes people with mental disorders feel isolated or rejected by community members. Moreover, they stated that mental health stigma makes people with mental disorders feel ashamed and exclude themselves from society. The following are quotations from participants:

"...*they will feel that they are threatened by the community, they will feel deserted by the community, they will feel like outcast, they will never come right, things like that*" (P02).

"*The mentally ill patients still feel rejected by the great community, the mentally ill patients feel shunted away from others, especially when it comes to the nurses, the mentally ill patients feel unwelcome to the facility ... they feel they don't belong somewhere*" (P04).

People with mental disorders adopt acting-out behaviours

The participants indicated that mental health stigma causes people with mental disorders to adopt acting-out behaviours. They explained that mental health stigma can lead people with mental disorders to commit suicide. They stated that people with mental disorders become aggressive when people stigmatise them, for instance, by calling them names. Moreover, the participants mentioned that mental health stigma leads to defaulting on medication, and people with mental disorders hurt themselves and others. The following is an extract from one participant's interview:

"...they relapse and then they will become a danger to themselves, a danger to the community they are living in. They will have to be admitted, the family will call the police, taken to the hospital and the process starts again" (P15).

5.1.4 Conclusion

The findings of this study showed that PHC nurses lack mental health knowledge and hold negative beliefs and attitudes people with mental disorders. The findings indicated that PHC nurses believed that people with mental disorders are unpredictable, dangerous and aggressive. The findings also indicated that PHC nurses have feelings of frustration and fear while caring for PHC people with mental disorders. This study also found that PHC nurses keep social distance from people with mental disorders by avoiding contact with them and are not interested in caring for them. This study revealed that PHC nurses discriminate against people with mental disorders and often assign labelling names. It was explained that PHC nurses assign people with mental disorders to the mental health nurses, who are viewed as only responsible for mental health care. The participants indicated that there is a need for in-service mental health training for nurses to reduce mental health stigma.

5.1.5 Key findings

PHC nurses' mental health knowledge

The participants indicated that PHC nurses' lack of mental health knowledge causes their negative beliefs and attitudes towards people with mental disorders. To reduce mental health stigma, the participants suggested mental health training for nurses, such as in-service training.

PHC nurses' beliefs about people with mental disorders

The participants explained that certain PHC nurses believe that people with mental disorders are unpredictable, dangerous and aggressive.

PHC nurses' attitudes towards people with mental disorders

The participants reported PHC nurses' frustration and fear while caring for PHC people with mental disorders. PHC nurses do not want to be associated with people with mental disorders, do not listen to them and send them back home when a mental health nurse is not available. PHC nurses label people with mental disorders with derogatory names and discriminate against them. PHC nurses' attitudes towards people with mental disorders is influenced by internal factors such as the interpersonal relationships between PHC nurses and people with mental disorders and PHC nurses' beliefs about them. PHC nurses' attitudes are also influenced by the attitudes of PHC administrative staff, the organisation and the residential community towards people with mental disorders.
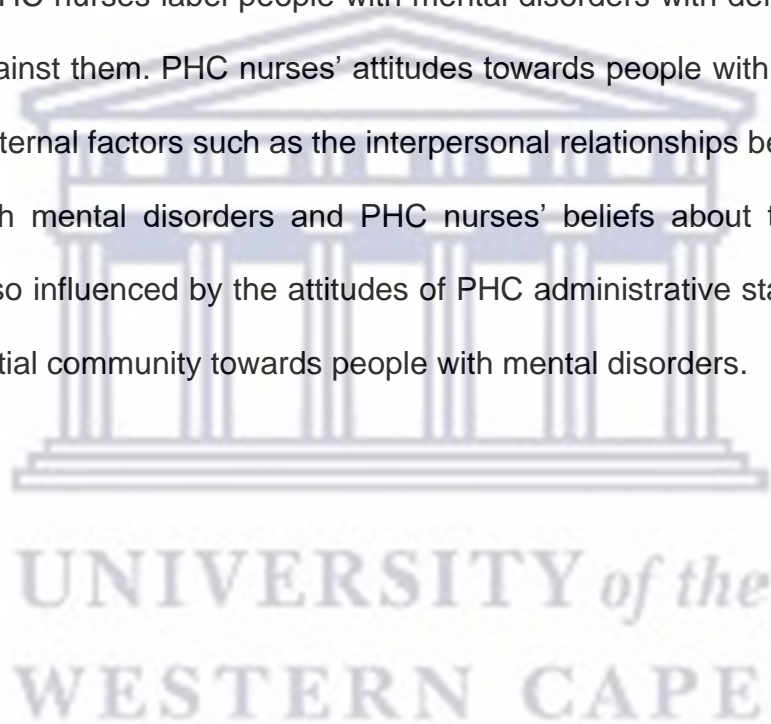
5.2 Qualitative results discussion

5.2.1 Introduction

This section presents the discussions of five themes linked to three components: attitudes, beliefs, and mental health knowledge, and at the end of this discussion is a conclusion. An investigation of mental health stigma from participants' views helps determine the interventions to reduce this stigma (Alamer, Alsaad, Al-Ghareeb, Almomatten, Alaethan & AlAmeer, 2021). The objective of the qualitative study focused on the understanding of mental health stigma and its reduction from nurses' points of view.

5.2.2 PHC nurses' attitudes towards people with mental disorders

For the purposes of this discussion, two themes are discussed under the attitude component.

1) People's negative perceptions of people with mental disorders

    • Social isolation of people with mental disorders

    • Discrimination of people with mental disorders at health care facilities

    • People are not interested in understanding people with mental disorders

2) Factors affecting utilisation of mental health care services at PHC facilities

    • Behaviour of people with mental disorders influences staff reaction

    • Health care providers are scared of people with mental disorders

5.2.2.1 People's negative perceptions of people with mental disorders

The participants of this study revealed that people with mental disorders are isolated and discriminated against, and certain PHC nurses are not interested in caring for them.

5.2.2.1.1 Social isolation of people with mental disorders

Social isolation means avoiding the proximity between an individual and another person in a social situation (Jombo et al., 2019). For instance, people with mental disorders are

marginalised from society (Yen, Huang & Chien, 2022). In this regard, the findings of this study revealed that certain PHC nurses did not want to interact with people with mental disorders, and others provided care to people with mental disorders in a hurried manner. The fact that PHC nurses do not want to socialise with people with mental disorders and avoid them is a part of the negative attitudes shown. These findings are inconsistent with the disagreement on social distance by the majority of PHC nurses who participated in the survey (See Table 4.5 in Section 4.1.6). Thus, there was a need to conduct quantitative and qualitative studies to minimise biases associated with a self-report study.

PHC nurses' social distance reported in this study is supported by other studies' findings that revealed nurses' social distance from people with mental disorders. A study conducted in Nigeria by Jombo et al. (2019) found that the majority of the health care providers including nurses kept social distance from people with mental disorders. Similarly, a study carried out in USA by de Jacq et al. (2021) reported nurses' social distance distancing from people with mental disorders. Moreover, a study done in the USA by Weissinger, Brooks Carthon, Ahmed and Brawner (2021) reported that the ward staff, including nurses avoided caring for people with mental disorders and ignored their complaints. In contrast, a study done in Turkey by Yalçın, Bilgin and Özaslan (2019) with 174 nurses showed that nurses cared for people with mental disorders without keeping their distance.

In South Africa, social isolation of people with mental disorders has been documented (Modis, Mokgaola & Sehularo, 2021). For instance, PHC nurses' social distance from people with mental disorders at PHC facilities was noted in a study carried out in Gauteng province (Card & McGlynn, 2020). That some PHC nurses stay away from people with mental disorders for whom they are supposed to care concerns the health system. Caring is a core value recommended by the South African Nursing Council (2013), which promotes the right of people to access quality nursing care without discrimination. In South Africa, caring, respect and responsiveness are values supported by the Western Cape Department

of Health (2022). These values are not excluded from mental health care services, and people with mental disorders have the right to receive care.

5.2.2.1.2 People discriminate against and are not interested in understanding people with mental disorders

The current study's findings showed that certain PHC nurses discriminate against people with mental disorders and do not listen to their complaints. This is evidence of PHC nurses' negative attitudes towards people with mental disorders seeking care at PHC facilities. However, most PHC nurses used in the survey study (step one of phase one included in this study) denied that PHC nurses avoided caring for people with mental disorders (See Table 4.5 in Section 4.1.6).

The present qualitative findings confirm PHC nurses' avoidance and reluctance to care for people with mental disorders, as reported by a minority of respondents in the survey. Discrimination against people with mental disorders was reported among PHC providers in a study conducted in Chile, these PHC providers cared for patients with other conditions who were in the same queue with people with mental disorders who were overlooked (Vaccari et al., 2020). This is an injustice, and any healthcare provider discriminating against people with mental disorders violates their human rights. The discrimination against people with mental disorders prevents them from accessing health care, compromising their human rights (World Health Organisation, 2022c).

The findings of this study indicate that PHC nurses are not interested in caring for people with mental disorders. Consistent with this finding, nurses employed in a study conducted in Iran by Rahmani, Mohammadi and Fallahi-Khoshknab (2021) showed a lack of interest in caring for people with mental disorders. A study conducted in Sweden by Löyttynen, Graneheim and Hörnsten (2023) also indicated that certain PHC nurses were not interested in caring for people with mental disorders. Similar to these findings, people with mental

disorders employed in a study conducted at PHC facilities in Scotland by Gray and Brown (2017) reported that nurses ignored them and did not attend to their needs. Moreover, a study carried out in Benin and Nigeria found that certain nurses did not attend to the needs of people with mental disorders (Omoronyia, Ndiok, Enang & Obande, 2021). The lack of nurses' attention to the needs of people with mental disorders is associated with negative attitudes towards people with mental disorders, these negative attitudes stem from a lack of mental health knowledge.

By ignoring the needs of people with mental disorders, nurses show a lack of interest in caring for people with mental disorders. A study conducted in Taiwan by Chou and Tseng (2020) reported that nurses did not show respect to people with mental disorders. Consistent with this finding, a study carried out in Indonesia reported nurses' lack of interest in caring for people with mental disorders and their disrespectful attitude towards them (Asmaningrum, Kurniawati & Tsai, 2020). In contrast, other studies conducted in Sweden showed that nurses treated people with mental disorders fairly and were responsive to their needs (Lindström, Sturesson & Carlborg, 2020; Holmberg, Hammarbäck & Andersson, 2020). Similarly, a study carried out in Australia by Sreeram, Cross and Townsin (2023) with mental health nurses showed that they were interested in interacting with and listening to people with mental disorders. Thus, it can be concluded that mental health nurses with positive attitudes towards people with mental disorders is due to mental health training.

All the participants who were interviewed in this study suggested PHC nurses undergo mental health training to reduce their negative beliefs and attitudes toward people with mental disorders. Consistent with this suggestion, mental health training for PHC care nurses was recommended to gain knowledge and skills in managing people with mental disorders (McInnes, Halcomb, Ashley, Kean, Moxham & Patterson, 2022). Moreover, a study carried out in Australia by Weare et al. (2019) indicated that nurses needed mental health knowledge to counteract their negative attitudes towards people with mental

disorders. In this regard, a study conducted in Brunei by Shahif et al. (2019) found that increased mental health knowledge among PHC nurses led to decreased mental health stigma. Corrigan's cognitive stigma model (2000) explains that the lack of mental health knowledge leads to negative beliefs and attitudes toward people with mental disorders. Hence, improved mental health knowledge can contribute to mental health stigma reduction.

5.2.2.2 Factors affecting utilisation of mental health care services at PHC facilities

The findings of this study reveal that the behaviour of people with mental disorders influences staff reactions such as frustration and fear. As in this finding, a study conducted in Chile by Vaccari et al. (2020) found that PHC providers who previously observed the aggressive behaviour of people with mental disorders developed negative attitudes towards them.

5.2.2.2.1 PHC nurses' frustration caused by caring for people with mental disorders

Nurses interviewed in a study done in the United Kingdom expressed their frustration caused by caring for unpredictable and frequently disorientated patients with delirium requiring nurses' repeated orientation (Zamoscik, Godbold & Freeman, 2017). Consistent with this finding, nurses expressed the feeling of frustration and stress caused by the bizarre behaviour and unpredictability of people with mental disorders in a study conducted in Jordan (Hasan & Tumah, 2019). Similarly, nurses' feelings of frustration, anxiety and anger caused by caring for people with mental disorders were documented in a study conducted in Greece (Kaba et al., 2020). Moreover, nurses' frustration led to a lack of empathy towards aggressive people with mental disorders, as reported in a study carried out in Korea (Sim et al., 2020). Nurses manifested negative attitudes towards people with mental disorders due to people with mental disorders who were previously observed to be aggressive. If nurses observe the aggressive behaviour of people with mental disorders due to certain

circumstances, such as irritation or the symptoms of a mental disorder, they should not conclude that people with mental disorders are always aggressive. Since some nurses hold negative beliefs about people with mental disorders based on previous experience and leading to the anticipated frustration, these beliefs are explained by Corrigan's cognitive stigma model (2000) that elucidates how people with mental disorders' behaviour triggers individuals' negative attitudes.

Studies support the findings of this study and report on nurses' frustration, that has been discussed in Chapter Four (Section 4.2.6). Nurses' frustration caused by caring for people with mental disorders was reported in Scotland (Gray & Brown, 2017) and in Australia (Beks et al., 2018; Zugai et al., 2018). The qualitative findings explored the frustration experienced by PHC nurses in contact with people with mental disorders seeking care at the PHC facilities.

To overcome frustration and fear, the participants of this study suggested that PHC nurses should undergo mental health training to acquire mental health knowledge and skills and learn how to manage people with mental disorders who are aggressive. Moreover, they will be aware of signs and symptoms of common mental disorders which are not always associated with possible aggression. PHC nurses need to know the causes of common mental disorders to change their negative beliefs (internal attribution). Weiner's attributional theory (1985) explains that people strive to know the causes of a situation and internal attribution is associated with people's negative beliefs about the individual being the cause of his/her own situation. A study conducted in South Africa recommended mental health training for nurses to reduce their negative attitudes towards people with mental disorders (Ntlanzi, 2019).

5.2.2.2.2 PHC nurses' fear caused by caring for people with mental disorders

The findings of this study revealed that PHC nurses feared people with mental disorders. Nurses' fear of people with mental disorders is discussed in Chapter Four of this study (see Section 4.2.5). Comparing the survey results (step one of phase one) and qualitative results (step two of phase one) included in the current study, these results are complementary. The majority of the nurses who were interviewed explained that PHC nurses are scared of people with mental disorders while over half of the respondents in the survey disagreed with nurses' fear of people with mental disorders. Furthermore, the percentages of the surveyed respondents who agreed with nurses' fear and those who were uncertain are nearly half of the respondents. Therefore, both quantitative and qualitative findings reveal the nurses' fear of people with mental disorders.

Other studies proved that health care providers feared people with mental disorders (Ihalainen-Tamlander et al., 2016; Mkhonto & Hanssen, 2018; Jina-Pettersen, 2022). In this regard, a study carried out in in Spain, Portugal and Italy by Del Olmo-Romero et al. (2019) indicated that nurses were scared of people with mental disorders. Nurses employed in a study conducted in Iran by Rahmani et al. (2021) expressed their fear of people with mental disorders. Moreover, nurses employed in a study done in Sweden were scared of people with mental disorders due to their unpredictable behaviour (Johanna et al., 2022).

In South Africa, a study carried out in the Gauteng province by Mkhonto and Hanssen (2018) found that nurses were scared of people with mental disorders due to their perceived aggressive behaviour. Similarly, nurses employed in a study carried out the North West province expressed their feeling of fear because they had observed certain people with mental disorders being aggressive and uncooperative (Motshabi, du Plessis & Watson, 2022). Certain people with mental disorders can manifest aggressive behaviour due to the symptoms of their condition and the principles of aggression management are in place. A

study carried in Korea by Sim et al. (2020) reported that nurses were able to manage aggressive people with mental disorders.

Nurses' fear of people with mental disorders can compromise good quality mental health care (Hammarström et al., 2019) because nurses might avoid them, which prevents nursing care. Supporting this statement, Tostes, Bandeira and Oliveira (2020) explained that care for people with mental disorders can be negatively affected by the fear of the individuals responsible for attending to their needs. Similarly, Jara-Ogeda, Leyton and Grandón (2022) explained that health care providers' belief about people with mental disorders being dangerous could negatively impact mental health care delivery. A study done in the USA found that health care providers' negative attitudes led to the provision of poor quality mental health care (Crumb, Mingo & Crowe, 2019). Inadequate mental health care was reported among health care providers rushing to provide care for people with mental disorders as they feared being harmed (Crumb et al., 2019). Once again, the current study participants suggested mental health training for PHC nurses to overcome their fear of people with mental disorders.

5.2.3 PHC nurses' beliefs about people with mental disorders

For the discussion purposes, two sub-themes emerged from Theme one '*People's negative perceptions of people with mental disorders'* are discussed under the beliefs component:

- People's belief about people with mental disorders are not the same as normal people.
- Labelling of people with mental disorders.

5.2.3.1 People's belief that people with mental disorders are not the same as normal people

The findings of this study indicated that PHC nurses believe that people with mental disorders are not the same as normal people. Consistent with this finding, health care providers employed in a tertiary hospital in a study conducted in Nigeria believed that people with mental disorders were inferior to the rest of society (Ubaka, Chikezie, Amorha & Ukwe, 2018). Similarly, another study done in Nigeria by Argungu, Shehu and Ibrahim (2021) revealed that nurses perceived people with mental disorders as inferior to those without mental disorders.

A study carried out in Chile by Vaccari et al. (2020) indicated that PHC providers believed that people with mental disorders are incompetent and psychotic. In a study conducted in Nepal, India, Tunisia, Lebanon, Czech Republic, Hungary and Italy by Koschorke et al. (2021) health care providers expressed that people with mental disorders lacked self-control. Medical students called People with mental disorders mad in a study carried out in Guinea-Conakry (Sow, Van Dormael, Criel, Conde, Dewez & de Spiegelaere, 2018). Similar to this finding, a study carried out in the USA by Jassir Acosta et al. (2021) reported that people with mental disorders were called crazy by medical officers. Moreover, people with mental disorders who participated in a study carried out in Russia complained that the consultation time with medical doctors was very limited (Svetlichnaya, Voronov & Smirnova, 2022). Similarly, this study's findings indicated that the nurses who were supposed to understand what people with mental disorders are going through undermined them.

Studies conducted in the United Kingdom revealed an association between mental disorders and demonic possession (Mantovani, Pizzolati & Edge, 2017; Dare, Jidong & Premkumar, 2022). In a study conducted in Kenya, nurses believed that people with mental disorders are bewitched (Mendenhall et al., 2018). Similarly, a study carried out in Ghana

reported demonic possession associated with mental disorders (Bonsu & Yendork, 2019; Mfoafo-M'Carthy & Grischow, 2022). Similar belief about mental disorders due to demonic possession was reported among health care providers who participated in a study conducted in Ethiopia (Tesfaye et al., 2022).

In South Africa, PHC nurses used in a study carried out in the Western Cape province believed that caring for people with mental disorders was a waste of time (Maconick et al., 2018). This negative belief is in opposition to the Mental Health Act 17 of 2002 that emphasises the right of people with mental disorders to have access to health care. Another study conducted in the North West province revealed that health care providers perceived people with mental disorders as crazy (Monnapula-Mazabane & Petersen, 2021). A further study carried out in the Gauteng province by Mkhonto and Hanssen (2018) found that nurses believed that patients with dementia are witches. Since health care providers believe that people with mental disorders are not the same as normal people, this negatively influences the provision of health care.

5.2.3.2 Beliefs *about people with mental disorders being unpredictable, dangerous and aggressive*

The findings of this study showed that PHC nurses believe that people with mental disorders who present to the PHC facilities are unpredictable, dangerous and aggressive. Chapter Four (Section 4.2.4) discusses the negative beliefs about unpredictability, dangerousness and aggression of people with mental disorders. Both survey and qualitative findings reveal the prevalence of these beliefs; therefore, the survey and qualitative results are complementary. However, the qualitative study allowed the participants to explore these beliefs. People with mental disorders are believed to be aggressive, dangerous and unpredictable; as a result, individuals are scared of them and stay aware of them (Babić, Babić, Vasilj & Avdibegović, 2017; Jombo et al., 2019).

Nurses used in a study conducted in Spain, Portugal and Italy by Del Olmo-Romero et al. (2019) and in Nigeria by Jombo et al. (2019) reported their belief about the dangerousness of people with mental disorders. Similarly, a study conducted in Nepal, India, Tunisia, Lebanon, Czech Republic, Hungary and Italy by Koschorke et al., (2021) reported health care providers' belief about the dangerousness and aggression of people with mental disorders. Moreover, nurses used in a study undertaken in Switzerland reported aggressive behaviour of people with mental disorders (Schlup, Gehri & Simon, 2021). Consistent with these findings, PHC providers in Lebanon reported aggressive behaviour of people with mental disorders (Abi Hana et al., 2022). Nurses employed in a study conducted in Colombia by Zaraza-Moralesa et al. (2022) perceived people with mental disorders as unpredictable and aggressive resulting in the nurses fearing to care for them.

In South Africa, a study conducted by Monnapula-Mazabane and Petersen (2021) also reported health care providers' belief about the dangerousness of people with mental disorders. Nurses at PHC facilities are exposed to people with mental disorders seeking care, especially those who make follow-up visits. Since nurses are the first point of contact for people with mental disorders (Saunders et al., 2018), nurses should learn how to manage people with mental disorders.

5.2.4 PHC nurses' knowledge of mental health stigma

For the purposes of discussion, three themes are discussed under the knowledge component.

1) Theme 3: Perceptions of mental disorders and causes of stigma
2) Theme 4: Nurses' negative perceptions attached to the geographical areas people with mental disorders come from
3) Theme 5: Consequences of stigma on people with mental disorders

5.2.4.1 Perceptions of mental disorders and causes of stigma

This theme generated three sub-themes namely '*Nurses' knowledge of different types of mental disorders that are at risk of stigma', 'Lack of mental health knowledge causes stigma towards people with mental disorders', 'Behaviour of people with mental disorders leads to stigma'*.

The three sub-themes interact as the level of mental health knowledge about the types of mental disorders and behaviour of people with mental disorders depending on each type of mental disorder can determine an increase or decrease in mental health stigma. Hence, the three sub-themes are discussed together for a better understanding of the phenomenon of mental disorders and the causes of stigma. The participants of this study showed their knowledge of common mental disorders and their understanding of disorders at risk of being more stigmatised than others. The participants viewed the following mental disorders as at risk of being more stigmatised than others: substance induced psychotic disorder, schizophrenia, bipolar mood disorder, psychosis and depression. Supporting this finding, a study carried out in Malaysia by Hanafiah and Van Bortel (2015) using nurses showed that schizophrenia, bipolar mood disorder and depression were mental disorders that were most likely to carry mental health stigma.

People with mental disorders diagnosed with substance induced psychotic disorder are viewed as weak, untrustworthy, and unwilling to quit using substances (Wogen & Restrepo, 2020). Similarly, Rey, Kurti, Badger, Cohen, Sarah and Heil (2019) mentioned that the use of drugs is viewed as a lack of willpower. The same study by Rey et al. (2019) indicated that people diagnosed with substance induced psychotic disorder are blamed because they are using drugs. This blame is based on the controllability, responsibility for the occurrence of a mental disorder and its reoccurrence (stability). The controllability, responsibility and stability are the three dimensions of the causes as explained in the attributional theory

(Weiner, 1985) and in Chapter One of this study (Section 1.6.1). In health care institutions, people with mental disorders diagnosed with substance induced disorder are labelled as psychotic, addicts or drug abusers, this labelling leads to poor quality of mental health care (Wogen & Restrepo, 2020).

Besides substance induced disorder, a study conducted in Iran by Rezayat, Mohammadi, Fallahi-khoshknab and Sharifi (2018) reported that people diagnosed with schizophrenia suffered from social rejection, negligence, humiliation and blames. These negative attitudes faced by people diagnosed with schizophrenia were due to the peoples' negative beliefs about them. People diagnosed with schizophrenia are perceived as aggressive thus causing peoples' fear of them (Rezayat et al., 2018). Consistent with this finding, a study done in India by Kumar, Vankar, Goyal, and Sharma (2020) found that people diagnosed with schizophrenia or bipolar mood disorder faced mental health stigma.

Similarly, a study carried out in Egypt found that people diagnosed with schizophrenia were also at greater risk of being stigmatised (Sayed, Ali & Hadad, 2021). These findings support the findings of this study and serve as evidence to confirm that the behaviour displayed by people diagnosed with schizophrenia puts them at greater risk of being stigmatised. Comparing depression with schizophrenia and bipolar mood disorder, a study conducted in India found that depression was viewed as more controllable than both other disorders (Krendl & Freeman, 2019). This means that people diagnosed with depression might be less at risk of being stigmatised although the participants of the current study indicated that depression has a greater risk of stigmatisation. A study conducted in the Netherlands by Oudejans, Spits and van Weeghel (2021) found that people hold social distance from people who have depressive disorders than psychotic disorders. Similarly, a study carried out in the USA showed that the members of faith communities held less social distance from people with depression than they did with people diagnosed with substance abuse disorders and schizophrenia (Jacobi, Charles, Vaidyanathan, Frankham & Haraburda,

2022). This study of Jacobi et al. (2022) found that the members of faith communities felt more comfortable in social relationships with people with depression.

5.2.4.2 Nurses' negative perceptions attached to geographical area from which people with mental disorders come from

This theme generated two sub-themes, namely '*Geographical location associated with stigma of people with mental disorders (gangsterism, drug infested areas)', 'Poor community areas are associated with stigma of people with mental disorders (poverty, poor knowledge and low education level, cultural beliefs, societal and family beliefs)*'.

The participants of this study were aware of the occurrence of mental health stigma based on geographical areas. They explained that community members and health care providers believe that people with mental disorders who stay in the areas of drug gangsterism suffer from mental disorders because they use drugs. This assumption is based on false beliefs as all people with mental disorders do not use drugs, and the fact that someone stays in a crime-infested area, drug-infested area or gang-ridden area, does not mean that she/he has a mental disorder.

Living in poor communities does not make everyone develop a mental disorder. However, the participants confirmed that there is an association between areas of people with mental disorders in residential areas and mental health stigma. Supporting this finding, the attitudes towards people with mental disorders might be influenced by the characteristics of their communities or social groups to which they belong (Bhavsar, Schofield, Das-Munshi & Henderson, 2019). Similarly, Rosen and Cruz (2018) argued that discrimination towards individuals occurs because of their socioeconomic status.

Studies carried out in Kenya by Mutiso et al. (2018) and in the United Kingdom by Bhavsar et al. (2019) showed that individuals living in cities had more negative attitudes towards people with mental disorders than those who live in rural areas. Similarly, a study conducted

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in India found that people with mental disorders from rural areas were more at risk of being stigmatised than those from urban areas (Kumar et al., 2020). These findings are consistent with the finding of the current study in terms of societal and community beliefs about people with mental disorder.

5.2.4.3 Consequences of stigma on people with mental disorders

This theme generated three sub-themes namely '*People with mental disorders default their treatment', 'Social outcast of people with mental disorders', 'Stigma triggers unwanted behaviour of people with mental disorders*'. The participants showed that they were aware of the consequences of mental health stigma, which can be prevented.

5.2.4.3.1 People with mental disorders terminate their treatment

The participants indicated that mental health stigma causes people with mental disorders to terminate their treatment. The fact that they default on their treatment, either by not taking medication at home or by not attending follow-ups on their medication at PHC facilities, can cause them to relapse. Supporting this, a study carried out in the United Kingdom indicated that mental health stigma hinders people with mental disorders from seeking mental health care (Mantovani et al., 2017). Similarly, people with mental disorders used in a study conducted in the USA by Snell-Rood, Hauenstein, Leukefeld, Feltner, Marcum and Schoenberg (2017) revealed that they avoided seeking mental health care because they did not want to be called crazy. Moreover, Hadera, Salelew, Girma, Dehning, Adorjan and Tesfaye (2019) argued that mental health stigma causes people with mental disorders to adhere poorly to treatment. A further study conducted in Mexico found that health care providers' stigma towards people with mental disorders remains a barrier to good quality of care (Lagunes-Cordoba et al., 2021).

In South Africa, a study conducted by Schierenbeck, Johansson, Andersson, Krantz and Ntaganira (2018) found that labelling discouraged people with mental disorders from

seeking professional help care at PHC facilities. Similarly, people with mental disorders used in a study conducted in the Kwa-Zulu Natal province by Mokwena and Ndlovu (2021) reported that they defaulted on treatment due to the rude remarks made by health care providers.

Not seeking help from the PHC facilities due to stigma, and defaulting on medication can worsen people with mental disorders' condition. As a result, the admissions or readmissions of people with mental disorders to mental health units might take place. Supporting this statement, a study carried out in India found that the readmission of people with mental disorders was due to non-adherence to medication (Indu, Vidhukumar & Sarma, 2018).

5.2.4.3.2 People with mental disorders become outcasts

The participants of this study said that mental health stigma causes people with mental disorders to become outcasts. This means that mental health stigma leads to the social isolation of people with mental disorders and loss of their human rights. For instance, in Ghana, it was reported that people with mental disorders lost the right to marriage and procreation, right to education and employment, and right to access food (Mfoafo-M'Carthy & Sossou, 2017). People with mental disorders are excluded from mainstream society and live a miserable life (Richter & Hoffmann, 2017). In this regard, Hadera et al. (2019) argued that mental health stigma can result in the impoverishment of people with mental disorders and negatively impacts on their socioeconomic well-being.

The impoverishment of people with mental disorders can be exacerbated by employment practices that discriminate against people with mental disorders. Supporting this statement, a study conducted in Taiwan found that people with mental disorders suffered from stigma leading to diminished job opportunities (Yen et al., 2022). Similar to these findings, a study conducted in India reported that people with mental disorders experience economic disadvantages in society (Gautam, Jain, Gupta, Gautam, Gaur & Shekhawat, 2022).

In South Africa, a study conducted at a PHC facility in the Eastern Cape province found that people with mental disorders risk losing their employment after being diagnosed with a mental disorder (Booysen, Mahe-Poyo & Grant, 2021). The study by Booysen et al. (2021) also found that stigma was viewed as a barrier to inclusion in community activities and access to schools. Health care providers should be educated about the rights of people with mental disorders' rights in order to change their negative beliefs and attitudes. Information on the South African Mental Health Care Act 17 of 2002 in respect of the rights of people with mental disorders can help PHC nurses change their negative attitudes towards people with mental disorders.

5.2.4.3.3 Stigma triggers unwanted behaviour of people with mental disorders

Participants in this study indicated that mental health stigma makes people with mental disorders adopt acting-out behaviours. People with mental disorders can respond to individuals' negative attitudes towards them. A study carried out in the United Kingdom by Wood, Byrne, Enache and Morrison (2018) found that health care providers' negative attitudes towards people with mental disorders caused behavioural changes such as self-isolation from society and feelings of low self-esteem among people with mental disorders. Moreover, a study carried out in the United Kingdom by Domoney, Trevillion and Challacombe (2020) revealed that people diagnosed with depression consumed alcohol as coping mechanism to deal with mental health stigma. Consistent with this finding, a study conducted in South Africa found that people with mental disorders use alcohol as a coping mechanism to deal with mental health stigma (Monnapula-Mazabane & Petersen, 2021).

5.2.5. Summary

The objective of qualitative data collection in this study was to explore mental health stigma and interventions that PHC nurses can use to reduce stigma towards people with mental disorders. The findings of this study showed that PHC nurses lack mental health knowledge

and consequently hold negative beliefs and attitudes towards people with mental disorders. The findings indicate that PHC nurses believe that people with mental disorders are unpredictable, dangerous and aggressive.

The findings also indicate that PHC nurses feel frustrated and scared when caring for people with mental disorders. Moreover, this study found that PHC nurses are not interested in caring for people with mental disorders from whom they social distance. This study also revealed that PHC nurses discriminate against people with mental disorders to whom they often assign labelling names. The findings showed that the participants understand the causes and consequences of mental health stigma, and they suggested mental health training for PHC nurses to counteract mental health stigma.

The next chapter presents and discusses the effective interventions used for health care providers to reduce stigma towards people with mental disorders.
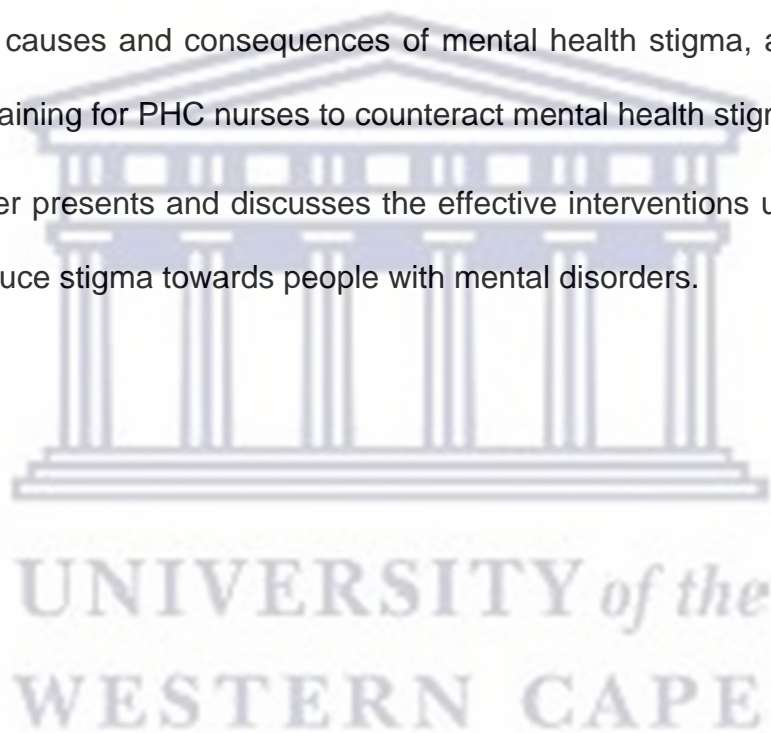
PHASE TWO: INTERVENTIONS FOR HEALTH CARE PROVIDERS TO REDUCE STIGMA TOWARDS PEOPLE WITH MENTAL DISORDERS IN A CARING ENVIRONMENT: A SYSTEMATIC REVIEW

This chapter refers to Phase two of this study and has two sections namely the presentation and discussion of the systematic review results.

6.1 The results of the systematic review

This section consists of an introduction, search strategy results, data extraction, quality appraisal, description of the results, interventions, outcomes and key findings.

6.1.1 Introduction

Interventions, such as educational, contact, and the combination of both educational and contact interventions have been used to reduce stigma towards people with mental disorders. However, little is known about the effectiveness of the protest intervention in reducing mental health stigma. The systematic review question was as follows: What are the interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment? This chapter presents the results on the effectiveness of educational, contact, and the combination of both educational and contact interventions used in the studies that have been critically appraised for the methodological quality.

6.1.2 Search strategy results

The systematic search identified a total of 630 studies from seven databases, as follows: CINAHL (30), Cochrane Library (10), ERIC (23), Google Scholar (106), MEDLINE (213), PsycARTICLES (31), and PubMed (217). A total of 430 studies were

excluded (Figure 6.1): 319 duplicates, 31 articles which used the general public as participants, three research projects and three reports due to lack of investigation on interventions, 17 systematic reviews which were not primary studies, 32 qualitative studies, and 25 mixed-method studies. This left 200 studies (Figure 6.1) eligible for assessment using PICO (Joanna Briggs Institute, 2014). Thereafter, 166 studies (Figure 6.1) were excluded for three reasons: the aim was not to reduce mental health stigma, lack of intervention, 26 abstracts excluded due to limited information on intervention, or the intervention was not useful in reducing mental health stigma.

The reviewers used PRISMA flow diagram (Moher et al., 2009) which is a chosen tool used in reporting on the exclusion, eligibility and inclusion of the articles (Zhang, Shields, Tian & Wang, 2019). The PRISMA flow diagram depicts a search detail (Zhang et al., 2019), showing the number of records that the reviewers identified, the number of records that were excluded and included, and the reasons for inclusion and exclusion. The search detail of this systematic review and the process of data collection are presented in Figure 6.1 below.
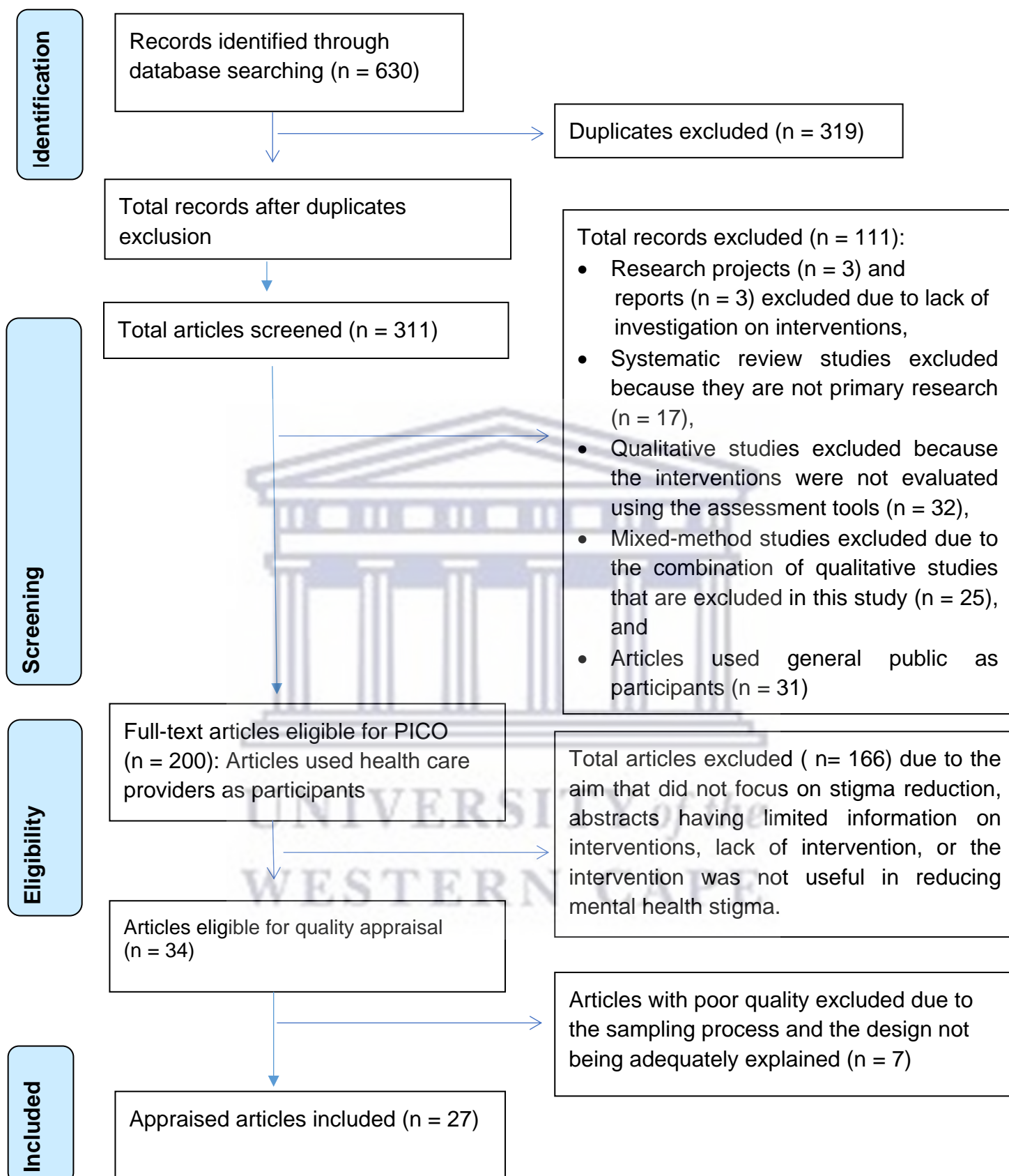
Figure 6.1: PRISMA Flow chart of the screened and selected articles adapted from Moher et al. (2009)

6.1.3 Quality appraisal

Through discussions, two reviewers namely the researcher and the supervisor of this study agreed on eligible articles and disagreement was resolved with consensus; therefore, a third reviewer was not used to mediate the disagreement. A total of 34 full-text articles were eligible for quality appraisal as indicated by Figure 6.1. Of the 34 studies, five were identified in CINAHL, three in Cochrane Library, three in Google Scholar, 17 in MEDLINE, one in PsycARTICLES and five in PubMed.

Two reviewers independently and critically assessed the methodological quality of the 34 articles using the use Quality Assessment Tool for Quantitative Studies. This tool has been tested for its validity and reliability (Armijo-Olivo et al., 2012) and is effective in the examination of "the study selection bias, study design, confounders, blinding, data collection methods, withdrawals and dropouts" (Morgan, Reavley, Ross, Too & Jorm, 2018). Among 34 articles that used health care profession students and practicing health care professionals as participants, three were of good quality, 24 studies were of fair quality and seven studies were of poor quality, as reported in Table 6.1. As a result, the final number of 27 full-text articles with methodological quality remained (Figure 6.1) for data extraction.
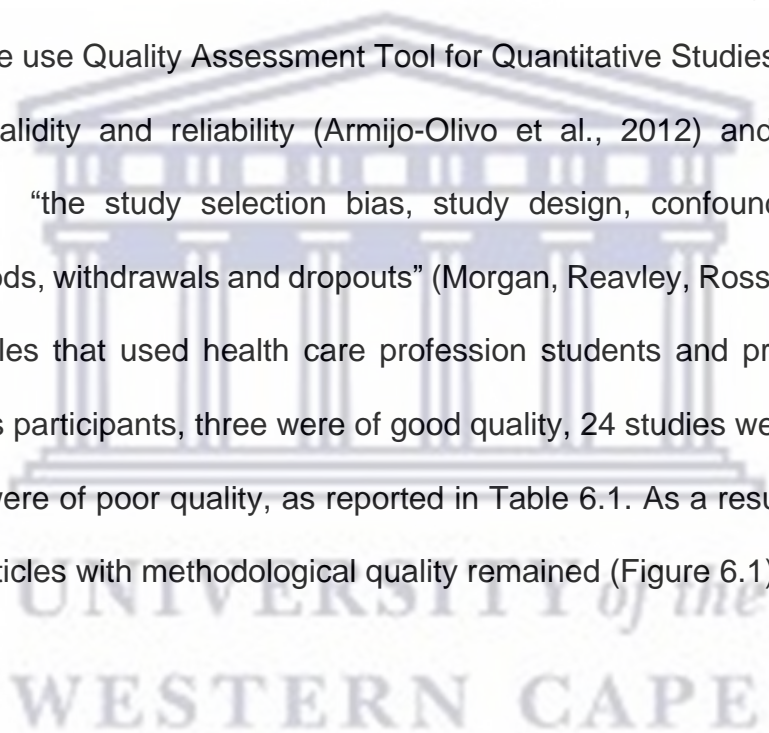
Table 6.1: Quality appraisal of the 34 studies

Authors	Selection bias	Study design	Confounders	Blinding	Data collection method	Withdrawals and dropouts	Global rating	Quality	Inclusion
Aggarwal et al., 2013)	Strong	Moderate	Weak	Moderate	Moderate	Strong	Moderate	Fair	Yes
Amsalem et al., 2019	Strong	Moderate	Weak	Moderate	Moderate	Strong	Moderate	Fair	Yes
Bamgbade et al., 2016	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Bamgbade et al., 2017	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Bayar et al., 2009	Weak	Moderate	Weak	Moderate	Strong	Weak	Weak	Poor	No
Bingham et al., 2018	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Brown, 2019	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Byrne et al., 2014	Strong	Moderate	Weak	Moderate	Moderate	Moderate	Moderate	Fair	Yes
Clement et al., 2012	Strong	Strong	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Douglass et al., 2019	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Duman et al., 2017	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Economou et al., 2017	Strong	Moderate	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Eksteen et al., 2017	Strong	Weak	Weak	Moderate	Strong	Not applicable	Weak	Poor	No
Fernandez et al., 2016	Strong	Strong	Moderate	Strong	Strong	Strong	Strong	Good	Yes
Flanagan et al., 2016	Strong	Strong	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Friedrich et al., 2013	Moderate	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes

Table 6.1: Quality appraisal of the 34 studies (continued)

Authors	Selection bias	Study design	Confounders	Blinding	Data collection method	Withdrawals and dropouts	Global rating	Quality	Inclusion
Galletly et al, 2011	Weak	Moderate	Weak	Moderate	Moderate	Weak	Weak	Poor	No
Happell et al., 2019	Moderate	Moderate	Weak	Moderate	Strong	Weak	Weak	Poor	No
Iheanacho et al., 2014	Strong	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Inan et al., 2019	Strong	Moderate	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Li et al., 2014	Strong	Moderate	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Magliano et al., 2016	Strong	Strong	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Mann et al, 2008	Strong	Moderate	Strong	Moderate	Strong	Weak	Moderate	Fair	Yes
McCormack et al., 2018	Weak	Moderate	Weak	Moderate	Moderate	Weak	Weak	Poor	No
Moxham et al., 2016	Moderate	Moderate	Moderate	Moderate	Strong	Weak	Moderate	Fair	Yes
Muzyk et al., 2017	Moderate	Moderate	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Nguyen et al., 2012	Moderate	Moderate	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
O'Reilly et al., 2011	Strong	Moderate	Weak	Moderate	Strong	Strong	Moderate	Fair	Yes
Patten et al., 2012	Moderate	Strong	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Rubio-Valera et al., 2018	Moderate	Strong	Weak	Moderate	Strong	Moderate	Moderate	Fair	Yes
Strassle, 2018	Moderate	Moderate	Strong	Moderate	Strong	Strong	Strong	Good	Yes

Table 6.1: Quality appraisal of the 34 studies (continued)

Authors	Selection bias	Study design	Confounders	Blinding	Data collection method	Withdrawals and dropouts	Global rating	Quality	Inclusion
Stuhlmiller et al, 2019	Moderate	Moderate	Weak	Moderate	Strong	Weak	Weak	Poor	No
Thonon et al., 2016	Strong	Strong	Moderate	Moderate	Strong	Strong	Strong	Good	Yes
Winkler et al., 2017	Weak	Strong	Weak	Moderate	Strong	Strong	Weak	Poor	No

6.1.4 Data extraction

The data were extracted by the two independent reviewers who independently extracted the articles' characteristics. They extracted the following characteristics: author of an article, publication year, country in which an article was published, title of an article, its aim, design, participants, intervention, comparision, and outcome (Tables 6.2, 6.3, 6.4). The reviewers presented the findings of included studies using a narrative form and data extraction form in a table form. Data extraction form links a systematic review with a primary research study, provides the foundation based on which the reviewers appraise, analyse, summarise and interprete the evidences (Büchter, Weise & Pieper, 2020). In this study, the reviewers adapted the data extraction from Geldsetzer et al. (2016) and based on PICO used in this review. Table 6.2 presents the characteristics of the studies that used educational interventions. Table 6.3 depicts the characteristics of the studies that used contact interventions. Table 6.4 displays the characteristics of the studies that used the combination of educational and contact interventions .

Table 6.2: Characteristics of the studies that used educational intervention

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Aggarwal et al., 2013 USA	Mental Illness Among Us (MIAU): A New Curriculum to Reduce Mental Illness Stigma Among Medical Students	• Design: pre- and post-intervention • Aim: To understand the effect of mental health course on medical students' perception of their own stigma surrounding mental illness • Participants: 250 medical students	Students completed the questionnaire before and after a two-hour session educational intervention 'MIAU' course in which they shared their experience of mental disorder and related stigma	• Comparison between the pre- and post-intervention: students' social distance mean scores changed from 0.96 (sd 0.59) to 0.90 (sd 0.57) (p=0.003) • Outcome: Reduction in social distance from people with mental disorders
Byrne et al., 2014 Australia	Changing nursing student attitudes to consumer participation in mental health services: A survey study of traditional and lived experience-led education	• Design: pre- and post-intervention • Aim: To determine the degree of change in nursing students' attitudes towards people with mental disorders • 174 nursing students	Students completed the questionnaire before and after attending an educational intervention 'mental health course'	• Comparison between Pre-and post-intervention • Outcome: For both cohorts, there was a positive change in negative attitudes towards people with mental disorders (*p* < 0.005)

Table 6.2: Characteristics of the studies that used educational intervention (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Douglass & Moy, 2019 USA	Evaluation of the impact of a social media–focused intervention on reducing mental health stigma among pharmacy students	• Design: A pre-and post-intervention • Aim: To determine whether an educational intervention impacts stigma toward people with mental disorders • Participants: 114 pharmacy students	Students completed the questionnaire before and after intervention. Educational intervention: A 90-minute interactive learning module related to mental health stigma	• Comparison between pre- and post-intervention: There was a significant reduction in stigma (P <.0001) • Outcome: There was a positive change in negative attitudes towards people with mental disorders

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Table 6.2: Characteristics of the studies that used educational intervention (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Iheanacho et al., 2014 Nigeria	Attitudes toward mental illness and changes associated with a brief educational intervention for medical and nursing students in Nigeria	• Design: A pre-and post-test intervention • Aim: To examine medical and nursing students' attitudes and beliefs about people with mental disorders • Participants: 39 medical students and 43 nursing students	Students completed the questionnaire before and after an educational intervention 'a four-day course focusing on understanding of mental illness and treatment. Five interactive sessions per day focused on interviews of patients with psychosis or depression	• Comparison between pre- and post-intervention: Desire to socialise with people with mental disorders increased, mean score before the course was 0.62 and 0.73 after. nonbelief about witchcraft score as a cause of mental disorder was increased from 0.45 to 0.49 • Outcome: A decrease in negative attitudes such as social distance from people with mental disorders and a positive change in negative beliefs

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Table 6.2: Characteristics of the studies that used educational intervention (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Li et al., 2014a China	Mental health training programme for community mental health staff in Guangzhou, China: Effects on knowledge of mental illness and stigma	• Design: A pre- and post-test intervention • Aim: To improve the mental health knowledge and reduce the stigma among community mental health staff • Participants: 74 clinicians, 18 public health workers, five nurses and two pharmacists	The questionnaire was completed before and after an educational intervention 'one day mental health training course' focusing on the improvement in mental health knowledge about schizophrenia and bipolar disorder, and also focusing on mental health stigma reduction	• Comparison between pre- and post-intervention: Before the course, 62.6% of participants were able to recognise the signs and symptoms of schizophrenia, and the percentage increased to 71.7% after the course. The percentage increased from 73.8% to 76.8% for the recognition of the signs and symptoms of bipolar. Before the course, the attitudes score was 47.9 which decreased to 43.5 after the course ($P < 0.001$) • Outcome: Improvement in knowledge of schizophrenia and bipolar, and a positive change in negative attitudes (social distance) towards people with disorders

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Table 6.2: Characteristics of the studies that used educational intervention (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Muzyk et al., 2017 USA	Instructional design and assessment – emphasising Bloom's Affective Domain to Reduce Pharmacy Students' stigmatising attitudes	• Design: A pre- and post-intervention • Aim: To create a learning environment that would reduce pharmacy students' stigmatising attitudes towards people with mental disorders • Participants: 74 pharmacy students	Students completed the questionnaire before and after attending an educational intervention 'psychopharmaco-therapeutic module' consisting of six class sessions including especially common mental disorders over a two-week period	• Comparison between pre- and post-intervention: Before the intervention, fear mean score was 4.2 (sd 1.7) after intervention it was 3.3 (sd 1.7), for dangerousness mean score was 4.5(sd 1.5) and ; 3.6(sd 1.7) respectively • Outcome: A decrease in negative in negative attitudes such as fear and blame of people with mental disorders, and a decrease in negative beliefs about dangerousness of people with mental disorders

Description of the studies that used educational intervention

Six of the 27 studies that met inclusion criteria used educational interventions namely mental health modules/courses to reduce mental health stigma. In one study, medical students had a course 'Mental Illness Among Us' (MIAU) in which they shared their own experience of mental disorder and they had discussions. In other studies, the mental health modules/courses included information on mental disorders such as bipolar, depression, psychosis and schizophrenia. Information on mental health stigma was included in some of the mental health modules/courses.

Three components (mental health knowledge, beliefs and attitudes) which are the focus of mental health stigma reduction were mainly considered in the aims of the studies. Regarding the participants, five studies used health care profession students (medical, nursing and pharmacy students) to reduce mental health stigma. Four studies focused on changing students' negative attitudes while one study focused on changing students' negative beliefs and attitudes. One study targeted practicing nurses, pharmacists, clinicians and public health workers, focused on improving mental health knowledge and changing negative attitudes. The pre- and post-intervention designs were employed. In all the studies, the participants completed the questionnaire before (pre-) and after (post-) intervention. The pre-intervention scores and post-intervention scores were compared to determine the effect of the intervention.

The findings indicated that educational intervention decreased participants' social distance from people with mental disorders. Moreover, the findings showed that there was an improvement in mental health knowledge and a decrease in the participants' negative beliefs about the dangerousness of people with mental disorders.

Table 6.3: Characteristics of the studies that used contact intervention

Authors, year, and country	Title	Design, aim and participants	Intervention	Comparison and outcome
Brown, 2019 USA	The Effectiveness of Two Potential Mass Media Interventions on Stigma: Video-Recorded Social Contact and Audio/Visual Simulations	• Design: A controlled clinical trial • Aim: To evaluate the impact of video-recorded social contact and an audio/visual simulation on public stigma • Participants: 244 psychology students (social contact intervention group: 66, simulation group intervention: 92, control group: 86)	Students completed the questionnaire before and immediately after the intervention, and one week later. Intervention group was assigned to a social contact intervention (sixteen-minute video of someone living with schizophrenia). The second intervention group was assigned to a seven-minute audio/visual simulation of schizophrenia. The control group did not receive an intervention	• Comparison between the intervention and control groups: A decrease in social distance, and in dangerousness score for intervention group (p < .005), but not in the simulation intervention and control group (p > .005) • Outcome: After the intervention and a one-week later, there was a positive change in the contact intervention group's social distance and negative belief about dangerousness of people with mental disorders. There were no significant changes among the simulation and control groups

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Table 6.3: Characteristics of the studies that used contact intervention (continued)

Authors, year, and country	Title	Design, aim and participants	Intervention	Comparison and outcome
Flanagan et al., 2016 USA	"Recovery Speaks": A Photovoice Intervention to Reduce Stigma Among Primary Care Providers	• Design: A randomised controlled trial • Aim: To investigate the effects of "Recovery Speaks" in reducing mental health stigma • Participants: 27 primary care providers (Intervention group: 14, control group: 13)	Participants completed the questionnaire before and after the intervention. The intervention group was assigned to a one-hour photovoice intervention "Recovery Speaks," followed by discussion. The photovoice focused on individuals in recovery from mental disorders, who show pictures and tell accompanying recovery stories describing their contributions to their families and communities. The control group was not assigned to an intervention	• Comparison between the intervention and control group: There were significantly lower scores on intervention group's negative beliefs about people with mental disorders and addiction (p=.004), a decrease in perception of dangerousness (p=.03), a decrease fear of them (p< .001), an increase in desire to help them (p=.02). A significant difference was not noted among the control group • Outcome: A positive change in intervention group's negative attitudes and beliefs

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Table 6.3: Characteristics of the studies that used contact intervention (continued)

Authors, year, and country	Title	Design, aim and participants	Intervention	Comparison and outcome
Moxham et al., 2016 Australia	Can a clinical placement influence stigma? An analysis of measures of social distance	• Design: A quasi-experimental • Aim: To determine whether a five-day therapeutic recreation based non-traditional mental health clinical placement affected nursing student's stigma surrounding mental illness, compared to students attending a 'typical' MH placement • Participants: 79 nursing students (Intervention group: 40, control group: 39)	Students completed the questionnaire before and after the intervention, at three-month follow-up. The intervention group attended a five-day Recovery Camp (contact intervention), where individuals in recovery from mental disorders shared with them meals and accommodation, engaged in the same activities. The comparison group attended the clinical placement in health settings	• Comparison between the intervention and control group: The intervention group had significantly lower social distance scores, compared to the control group, after the intervention (p< 0.001) and 3-month follow-up (p< 0.001) • Outcome: There was a significant reduction in intervention group's social distance over a short and at a three-month follow-up, compared to the clinical placement

Table 6.3: Characteristics of the studies that used contact intervention (continued)

Authors, year, and country	Title	Design, aim and participants	Intervention	Comparison and outcome
Nguyen et al., 2012 Australia	Evaluating the impact of direct and indirect contact on the mental health stigma of pharmacy students	• Design: A non-randomised, two-group, comparative • Aim: To compare the effectiveness of contact interventions in reducing pharmacy students' mental health stigma • Participants: 244 pharmacy students (Intervention group:122, control group: 122)	Students completed the questionnaire before and after the intervention. Intervention group was assigned to a direct contact intervention (a 2-hour workshop in which people shared with the students their personal experiences of mental disorders focusing on symptoms, treatment, stigma and recovery. Control group attended a 90-minute workshop by watching films (an indirect contact intervention) of interviewed people telling stories about their experience of mental disorders and related stigma	• Comparison between intervention group and control group: There was a significant reduction in social distance mean score for both groups (p<0.05) • Outcome: There was a positive change in both intervention and control groups' negative attitudes towards people with mental disorders

Table 6.3: Characteristics of the studies that used contact intervention (continued)

Authors, year, and country	Title	Design, aim and participants	Intervention	Comparison and outcome
Patten et al., 2012 Canada	Effectiveness of contact-based education for reducing mental illness-related stigma in pharmacy students in Canada	• Design: A randomised controlled trial • To evaluate the impact of educational on pharmacy students' attitudes towards people with mental disorders • Participants: 131 pharmacy students (Intervention group: 57 Control group: 74)	Students completed the questionnaire before and after the intervention. Contact-based sessions employed people in recovery from mental disorders and who shared with the students their experience of the disorders and related stigma. Intervention group was assigned to a one-hour contact session involving an individual with bipolar disorder. Control group was assigned to one-hour session involving an individual with schizophrenia	• Comparison between intervention group and control group: There was a significant reduction in stigma among both groups. • Outcome: There was a positive change in both intervention and control groups' negative attitudes towards people with mental disorders

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Table 6.3: Characteristics of the studies that used contact intervention (continued)

Authors, year, and country	Title	Design, aim and participants	Intervention	Comparison and outcome
Thonon et al., 2016 Belgium	The effects of a documentary film about schizophrenia on cognitive, affective and behavioural aspects of stigmatisation	• Design: A randomised controlled trial • Aim: To evaluate the effects of a documentary film about schizophrenia on psychology students' their attitudes • Participants: 49 psychology students (Intervention group:24, control group: 25)	Students completed the questionnaire before and after the intervention. Intervention group was assigned to the intervention consisting of a 55-minute documentary film about schizophrenia. In the film, individuals with mental disorders who have been interviewed shared their feelings and thoughts about their disorder. The control group did not watch the film	• Comparison between the intervention and control group: There was a significant decrease in intervention group's beliefs about dangerousness ($p < .001$) and unpredictability ($p < .05$), in their desire for social distance ($p < .05$), but not in the control group's negative beliefs and attitudes • Outcome: There was a decrease in intervention group's negative beliefs about dangerousness and unpredictability of people with schizophrenia, and in negative attitudes such as social distance

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Description of the studies that used contact intervention

Six of the 27 studies that met inclusion criteria used contact interventions to reduce mental health stigma. Both direct (engaging with individual with mental disorder) and indirect (watching films/videos or audio/visual simulation) contact interventions were used. Two studies used videos/films of people in recovery from mental disorders, one study used a video and audio/visual simulation. One study used photovoice involving individuals in recovery from mental disorders, displaying pictures with accompanying recovery stories. Two studies used either recovery camps or sessions in which people in recovery from mental disorders sharing their experience of mental disorders and stigma.

Five studies used health care profession students (nursing, psychology, pharmacy students) while one study used primary health care providers. Four studies focused on reducing participants' mental health stigma and two studies aimed at changing participants' negative attitudes.

Four studies used randomised controlled trial designs: An intervention group and a control group were given different interventions in two studies. In another study, an intervention group was given an intervention and a control group did not receive an intervention. One study used a quasi-experimental design; an intervention group attended a recovery camp together with individuals with mental disorders and a comparison group attended the clinical placement. Another employed a non-randomised design.

The findings indicated that educational interventions decreased participants' social distance from people with mental disorders. Moreover, the findings showed that there was an improvement in mental health knowledge and a decrease in the participants' negative beliefs about the dangerousness of people with mental disorders. The findings

revealed that, in five studies, the contact interventions led to a decrease in participants' social distance from people with mental disorders. A positive change in negative belief about people with mental disorders seen as dangerous was noted in three studies. A decrease in fear of people with mental disorders and positive change in negative belief about people with mental disorders seen as unpredictable was noted in two studies.

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Amsalem et al., 2019 Israel	Reducing Stigma Towards Psychiatry among Medical Students: A Multicenter Controlled Trial	• Design: A controlled trial • Aim: To examine the effect of a novel anti-stigma intervention curriculum in reducing medical students' mental health stigma • Participants: 220 medical students (Intervention group: 57, control group: 163)	All the students completed the questionnaire before and after the intervention. Educational intervention: Both groups received theoretical lectures including mental disorders and treatment. Both groups attended practical training (contact intervention) where they engaged with people with mental disorders. The intervention group received additional two-hour exposure to people with mental disorders who shared with them personal stories followed by discussions on mental health stigma	• Comparison between the intervention and control group: In the intervention group, Attitudes towards Mental Illness scale (AMI) scores increased from 73.5 to 76.9(p<0.01). For the control group, there was no significant difference in AMI total scores • Outcome: There was a reduction in intervention group's stigmatising attitudes

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Bamgbade et al., 2017 USA	Evaluating the Impact of an anti-stigma intervention on pharmacy students' Willingness to Counsel People Living with Mental Illness	• Design: A pre- and post-intervention • Aim: To determine if exposure to a brief intervention course impacts pharmacy students' willingness to counsel people with mental disorders • Participants: 88 pharmacy students	The students completed the questionnaire before and after the anti-stigma intervention. Contact intervention: They watched videos. Educational intervention: presentations focusing on the mental disorders, signs and symptoms of depression and schizophrenia. Students had discussion and active-learning exercises	• Comparison between pre- and post-intervention: After intervention, there was a significant increase in willingness to care for people with schizophrenia ($p < 0.05$). • Outcome: Willingness to care was more improved for people with depression of which recovery belief scores were higher than people with schizophrenia

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Bamgbade et al., 2016 USA	Impact of a Mental Illness Stigma Awareness Intervention on Pharmacy Student Attitudes and Knowledge	• Design: A pre- and post-intervention. • Aim: To determine if exposure to an intervention course impacts pharmacy students' mental health stigma and mental health knowedge • Participants: 120 pharmacy students	Students completed the questionnaire before and after a 2.5-hour anti-stigma intervention Students watched videos (contact intervention) and had presentations, discussions, and active-learning exercises (educational intervention)	• Comparison between pre- and post-intervention: mental health knowledge scores significantly increased from 5.9 to 6.8. There was significantly less stigma related to recovery, safety, separation, and comfort stigma (p <0.01). mental health knowledge scores significantly increased from 5.9 to 6.8 • Outcome: Stigmatising attitudes towards depression and schizophrenia decreased after the intervention, there was an improvement in mental health knowledge

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Bingham & O'Brien, 2018 New Zealand	Educational intervention to decrease stigmatising attitudes of undergraduate nurses towards people with mental illness	• Design: A pre- and post-intervention • Aim: To determine whether mental health theory and clinical experience impact nursing students' attitudes towards people with mental disorders • Participants: 45 nursing students	Students completed the questionnaire before and after intervention. Students had theoretical learning.(educational intervention) and attended mental health clinical practice (contact intervention) for four hours per week over three weeks to address stigma	• Comparison between pre- and post-intervention: There was a significant decrease in negative beliefs and attitudes from pre- to post-intervention: pity scores (p <0.01), dangerousness (p <0.01), fear (p <0.00), and avoidance (p <0.00) • Outcome: A positive change in negative attitudes such as fear and avoidance, and in negative beliefs about dangerousness of people with mental disorders

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Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Clement et al., 2012 United Kingdom	Filmed v. live social contact interventions to reduce stigma: randomised controlled trial	• Design: A randomised controlled trial • Aim: To compare the effectiveness of a DVD and a lecture in reducing nursing students' mental health stigma • Participants: 360 nursing students (DVD intervention group:117, live intervention group:119, control group:124)	The questionnaire was completed before and after intervention, and at a four-month follow-up. A DVD intervention group watched a 71-minute DVD of people with mental disorders talking about their experiences of mental disorders and related stigma (contact intervention). A live intervention group watched a 85-minute live presentation (Contact intervention). The control group attended a 70-minute lecture about stigma (Educational intervention)	• Comparison between the intervention groups and control group: The DVD intervention group had a greater improvement in attitudes immediately after the intervention (P= 0.022) and at a four-month follow-up (P= 0.011) than the live group. Both DVD and live intervention groups had a positive change in negative attitudes scores (P = 0.003) immediately after intervention than the control group • Outcome: There was a positive change in DVD and live intervention groups' negative attitudes towards people with mental disorders

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Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Duman et al., 2017 Turkey	Effects of two different psychiatric nursing courses on nursing students' attitudes towards mental illness, perceptions of psychiatric nursing, and career choices	• Design: A quasi-experimental • Aim: To compare the attitudes of nursing students educated using problem-based learning (PBL) with those educated using the traditional method and psychiatric nursing course • Participants: 202 nursing students (Intervention group: 130, control group: 72)	Students completed the questionnaire before and after intervention. Intervention group was educated using problem-based learning (PBL) consisting of 25 hours for theoretical sessions (Educational intervention), the control group was educated using traditional method consisting of 74 hours for theoretical sessions (Educational intervention). Contact intervention: Both groups had 96 hours for clinical practice	• Comparison between intervention group and control group: After the intervention, there was a decrease in intervention group's negative attitudes than in control group. There was a greater decrease in control group's beliefs about incurability and dangerousness post-intervention scores (P = 0.00) than Intervention group • Outcome: A decrease in intervention group's negative beliefs and attitudes towards people with mental disorders and decrease in control group's negative beliefs

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Economou et al., 2017 Greece	Medical students' attitudes to mental illnesses and to psychiatry before and after the psychiatric clerkship: training in a specialty and a general hospital	• Design: A pre- and post-intervention • Aim: To explore the impact of the psychiatric clerkship on medical students' attitudes Participants: 678 medical students	Students completed the questionnaire before and after intervention. Students attended 20 theoretical lectures (educational intervention) of a three hour duration, focusing on common mental disorders' causes, signs and symptoms, and management. They had a four-week practical training (100 hours) in the clinical placement (contact intervention)	• Comparison between pre-and post-intervention: Students' attitudes towards mental disorders were significantly improved after the mental health training (p<0.001) • Outcome: There was a reduction in negative attitudes such as social distance from people with mental disorders in short-term

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Fernandez et al., 2016 Malaysia	Effects of Brief Psychoeducational Program on Stigma in Malaysian Pre-clinical Medical Students: A Randomised Controlled Trial	• Design: A randomised controlled trial • Aim: To examine the effects of educational programme on reducing stigma in pre-clinical medical students • Participants: 102 medical students (Intervention first group: 51, intervention second group: 51)	Students completed the questionnaire before and after intervention, and at one-month follow-up. Intervention first group was assigned to a 45-minute face-to-face contact and one-90 minute educational lecture about schizophrenia Intervention second group was assigned to 40-minute video based contact and a 90-minute educational lecture condition	• Comparison between two intervention groups: There was a significant reduction in • social distance scores in both groups, immediately after intervention and at a one-month follow-up • Outcome: For both groups, there was a reduction in negative attitudes such as social distance from people with mental disorders

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Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Friedrich et al., 2013 United Kingdom	Anti-stigma training for medical students: The Education Not Discrimination project	- Design: A randomised controlled trial - Aim: To ascertain the effects of the training on medical students' mental health knowledge and attitudes - Participants: 1452 medical students (Intervention group: 1066, control group: 386)	Students completed the questionnaire before and after intervention, and at a 6- month follow-up. Educational intervention: A short lecture about stigma and discrimination. Contact intervention: People with experience of mental disorders shared testimonies about mental health disorders and related stigma. Control group did not receive an intervention .	- Comparison between intervention group and control group: There was a significant improvement in intervention group's stigma-related knowledge, attitudes immediately after intervention but not at a 6-month follow-up - Outcome: There was an improvement in intervention group's mental health knowledge and increased empathy towards people with mental disorders

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Inan et al., 2019 Turkey	The Impact of Mental Health Nursing Module, Clinical Practice and an Anti-Stigma Program on Nursing Students' Attitudes toward Mental Illness: A Quasi-Experimental Study	• Design: A quasi-experimental • Aim: To examine the impact of mental health nursing module, clinical practice, and anti-stigma programme nursing students' attitudes • Participants: 64 nursing students	Students completed the questionnaire before and after intervention 'mental health nursing module', after the clinical practice and anti-stigma program. All the students attended a 24-hour mental health nursing module (educational intervention) focusing on stigma, causes, symptoms of schizophrenia and its treatment. They attended clinical practice for 64 hours (contact intervention). Anti-stigma programme (contact intervention) lasted 32 hour and consisted of understanding of stigma and its impact, videos showing coping with stigma	• Comparison interventions: There were significant differences in the mean scores of the dangerousness subscale across pre-test and post-test 1, post-test 2 and post-test 3 (P=.000). social distance mean scores decreased significantly across all the interventions (P=.000) • Outcome: A positive change in negative belief about dangerousness, and in social distance

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Magliano et al., 2016 Italy	Improving psychology students' attitudes toward people with schizophrenia	• Design: A randomised controlled trial • Aim: To investigate the effect of an educational intervention and audio-testimony from people diagnosed with schizophrenia, on psychology students' attitudes • Participants: 188 psychology students (Intervention group: 76, control: 112)	Students completed the questionnaire before and after intervention. The educational intervention: They had three-hour sessions twice focusing on schizophrenia, stigma and its impact. Contact intervention: Audio-testimonies, and videos from anti-stigma campaigns	• Comparison between intervention and control groups: After intervention, there was a decrease in intervention group's negative beliefs scores related to recovery from mental disorders and unpredictability increased (p<.05). However, there was no significant difference in control group • Outcome: There was a reduction in belief about unpredictability of people diagnosed with schizophrenia, and increased belief about their recovery

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Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Mann & Himelein, 2008 USA	Putting the person back into psychopathology: An intervention to reduce mental illness stigma in the classroom	• Design: Experimental • Aim: To compare the effectiveness of two methods of teaching psychopathology in reducing stigma towards mental disorders • Participants: 53 psychology students (Intervention group:27, control group: 26)	Students completed the questionnaire before and after intervention. An experimental group attended class, learned depression, schizophrenia, and bipolar disorder (educational intervention), and watched a 60-minute video of people diagnosed with mental disorder (Contact intervention). The control group learned the DSM-IV criteria(educational intervention), and watched videos (contact intervention)	• Comparison between experimental and control groups: For the experimental group, there was a significant difference between pre-and post-intervention stigma scores (P < 0.01), indicating a positive change in negative attitudes • Outcome: There was a positive change in negative attitudes towards people with mental disorders

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
O'Reilly et al., 2011 Australia	Impact of mental health first aid training on pharmacy students' knowledge, attitudes and self-reported behaviour	• Design: A non-randomised controlled • Aim: To assess the impact of delivering Mental Health First Aid (MHFA) training for pharmacy students on their mental health knowledge and attitudes • Participants: 258 pharmacy students (Intervention group: 59, control group: 199)	Students completed the questionnaire before and after intervention. The intervention group attended the Mental Health First Aid (MHFA) course (educational intervention) focusing on skills and knowledge of early warning signs, causes and management of mental disorders. The contact intervention consisted of filmed video clips of people's experiences of mental disorders and group activities. The control did not attend the MHFA)	• Comparison between intervention and control groups: There was a significant mean decrease in total social distance of (p<0.001) for intervention group. There was also a significant difference in identification of a mental disorder (p=0.004) • Outcome: There was in increase in mental health knowledge and a decrease in negative attitudes such in social distance

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Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Rubio-Valera et al., 2018 Spain	Reducing the mental health-related stigma of social work students	• Design: A randomised controlled • Aim: To evaluate the impact of a social contact and education intervention to improve attitudes to mental illness in first-year social work students • Participants: 166 first-year social work students (Intervention: 87, control group:79)	Students completed the questionnaire before and after intervention, and at a three-month follow-up. The intervention group attended a 1-hour workshop led by an individual with experience of mental disorder and they had a lecture focusing on mental health problems and stigma. The control group received the intervention after the follow-up evaluation	• Comparison between intervention and control groups: There was significant difference between pre-and post-intervention in intervention group's attitudes (p < .05) meaning a decrease in stigma • Outcome: There was a positive change in intervention group's negative attitudes towards people with mental disorders

Table 6.4: Characteristics of the studies that used the combination of educational and contact interventions (continued)

Authors, year and country	Title	Design, aim, participants	Intervention	Comparison and outcome
Strassle, 2018 USA	Reducing Mental Illness Stigma in the Classroom: An Expanded Methodology	• Design: A quasi-experimental • Aim: To assess change in 147 college and university psychology students' beliefs about mental illness • Participants: 147 psychology students (Intervention groups: 109, control group: 38)	Students completed the questionnaire before and after intervention. Four intervention groups attended the same lecture (educational intervention) on stigma. The fifth group (control group) attended a lecture focusing on the causes, symptoms, and treatment for mental disorders. The first intervention group also watched a 30-minute video (contact intervention) related to stigma. The second intervention group also engaged in stigma-related advocacy (protest intervention). The third intervention group also interacted with individuals with mental disorders attending social rehabilitation sessions (contact intervention). The fourth intervention group, received all the above mentioned interventions	• Comparison between four intervention groups and control group: There was no significant difference in Total Scale mean scores for the control group but significant differences were found for all four intervention groups (p=0.000) • Outcome: Exposure to stigma reduction techniques reduced negative beliefs and increased interpersonal and social skills

Description of the studies that used educational and contact interventions

Fifteen of the 27 studies that met inclusion criteria used the combination of educational and contact interventions to reduce mental health stigma (See Table 6.4). Four studies employed lectures/theoretical learning and clinical placement/clinical practice. Two studies used videos and presentation sessions while four studies employed lectures and videos/DVDs. A further two studies used lectures/theoretical session and testimonies of people with experience of mental disorders. One study used mental health first aid, another used a lecture and a workshop in which an individual with experience of mental disorder shared the stories related to mental disorders with the participants. One study used a mental health module, clinical practice and anti-stigma programme.

Regarding the participants, four studies used medical students and three studies employed pharmacy students. Four studies used nursing students and three studies employed psychology students while one study used social work students.

Four studies focused on reducing participants' mental health stigma and six studies were aimed at changing participants' negative attitudes. One study focused on improving mental health knowledge and changing participants' negative attitudes while another study focused on improving mental health knowledge and changing participants' negative attitudes. One study aimed at changing participants' negative beliefs and another study's aim was to reduce negative attitudes, while one study was aimed at increasing willingness to care.

Regarding the designs, four studies used randomised controlled trials and three studies used quasi-experimental designs while another employed a non-randomised

design. Four studies used pre- and post-intervention designs and one study used control design.

One study used randomised design while another study used experimental design. The findings of this study showed that the combination of both educational and contact interventions reduced stigma and improved mental health knowledge. This combination used in another two studies decreased participants' social distance from people with mental disorders. In one study, this combination reduced social distance and increased mental health knowledge. In another study, social distance was reduced and there was a positive change in negative beliefs about people with mental disorders being seen as dangerous. Moreover, in four studies that used the above combination there were positive changes in negative attitudes. The use of the combination of these interventions, in one study, led to a positive change in negative beliefs. The combination was also used in a further study and there was an improvement in mental health knowledge and a positive change in negative attitudes.

The combination of educational and contact interventions were employed in one study, the willingness to care and the belief about the recovery increased. In another study, this combination decreased participants' negative attitudes such as fear and avoidance of people with mental disorders, and decreased belief about their dangerousness. One study also revealed that the combination was useful to improve mental health knowledge and empathy towards people with mental disorders. Moreover, a positive change in negative beliefs and attitudes was reported in one study. The combination of educational and contact interventions used in another study increased the belief about recovery from mental disorder and decreased the belief about people with mental disorders being seen as unpredictable.

6.1.5 Summary of key findings

The summary of findings focuses on the types of interventions and their outcomes related to the increase in mental health knowledge, a change in negative beliefs and attitudes. The findings showed that the educational intervention, contact intervention, and the combination of educational and contact interventions were effective in improving mental health knowledge, reducing negative beliefs and attitudes towards people with mental disorders; thus reducing mental health stigma. Table 6. 5 depicts the summary of key findings.

Table 6.5: Summary of findings

Authors	Themes	Intervention outcomes	Concluding statement
Li et al. (2014a)	**Educational intervention**	**Mental health knowledge:** Increase in mental health knowledge	The educational intervention increased health care providers' mental health knowledge leading to a positive change in negative beliefs about people with mental disorders
Iheanacho et al. (2014), Muzyk et al. (2017)		**Beliefs:** • The educational intervention reduced the health care providers' negative beliefs about people with mental disorders	The educational intervention was effective in reducing health care providers' negative beliefs about towards people with mental disorders
Aggarwal et al. (2013), Byrne et al. (2014), Douglass & Moy (2019), Iheanacho et al. (2014), Li et al. (2014a), Muzyk et al. (2017)		**Attitudes:** • The educational intervention yielded a positive change in health care providers' negative attitudes such as social distance from people with mental disorders	The educational intervention was effective in reducing health care providers' negative attitudes towards people with mental disorders; for instance, social distance from people with mental disorders was reduced

Table 6.5: Summary of findings (continued)

Authors	Themes	Intervention outcomes	Concluding statement
Brown (2019), Flanagan et al. (2016), Thonon et al. (2016)	**Contact intervention**	**Beliefs:** The contact intervention caused a positive change in the health care providers' negative beliefs about people with mental disorders being dangerous and, unpredictable	The contact intervention reduced the health care providers' negative beliefs about dangerousness and, unpredictability of people with mental disorders
Brown (2019), Flanagan et al. (2016), Moxham et al. (2016), Nguyen et al., (2012), Patten et al, (2012), Thonon et al. (2016)		**Attitudes:** • Generally, the contact intervention caused a positive change in the health care providers' negative attitudes towards people with mental disorders • The contact intervention reduced the health care providers' fear of people with mental disorders and decreased their social distance from people with mental disorders. • It decreased the health care providers' blaming attitudes towards people with mental disorders	The contact intervention reduced health care providers' negative attitudes towards people with mental disorders such as their fear of people with mental disorders, social distance from them and blaming them

Table 6.5: Summary of findings (continued)

Authors	Themes	Intervention outcomes	Concluding statement
Bamgbade et al. (2016), Friedrich et al. (2013), O'Reilly et al. (2011)	**Combination of educational and contact interventions**	**Mental health knowledge**: The combination of educational and contact interventions increased health care providers' mental health knowledge	The combination of educational and contact interventions improved health care providers' mental health knowledge, thus reducing their negative beliefs and attitudes towards people with mental disorders
Bamgbade et al. (2017), Duman et al. (2017), Inan et al. (2019), Magliano et al. (2016), Strassle (2018)		**Beliefs:** • In general, the combination of educational and contact interventions caused a positive change in health care providers' negative beliefs about people with mental disorders • There was a positive change in health care providers' negative beliefs about people with mental disorders being dangerous unpredictable	The combination of educational and contact interventions led to a significant change in health care providers' negative beliefs towards people with mental illness, such as beliefs about dangerousness and unpredictability of people with mental disorders

Table 6.5: Summary of findings (continued)

Authors	Themes	Intervention outcomes	Concluding statement
Amsalem et al. (2019), Bamgbade et al. (2016), Bamgbade et al. (2017), Bingham & O'Brien (2018), Clement et al. (2012), Duman et al. (2017), Economou et al. (2017), Fernandez et al. (2016), Friedrich et al. (2013), Inan et al. (2019), Mann & Himelein (2008), O'Reilly et al. (2011), Rubio-Valera et al. (2018), Strassle (2018)	**Combination of educational and contact interventions**	**Attitudes:** • In general, the combination of educational and contact interventions caused a positive change in health care providers' negative attitudes towards people with mental disorders • There was a positive change in health care providers' fear and avoidance of people with mental disorders • There was a decrease in health care providers' social distance from people with mental disorders • There was an increased in health care providers' empathy towards people with mental disorders and their willingness to care for them	The combination of educational and contact interventions reduced in health care providers' negative attitudes towards people with mental disorders especially. For example, the attitudes related to the fear, social distance, and avoidance were reduced, the desire to care for people with mental disorders was increased

6.1.6 Interpreting the findings

The evidence showed that an increase in health care providers' mental health knowledge, and the reduction of their negative beliefs and attitudes were due to the following interventions:

- Educational intervention (theoretical mental health training)
- Contact intervention (caring for people with mental disorders in a health care setting or engaging with them in retreats, or watching videos on people with mental disorders)
- Combination of both educational and contact interventions

6.1.7 Data synthesis and reporting

The studies that have been reviewed had different interventions although these interventions were associated with theoretical mental health training or exposure to people with mental disorders. The appraised studies did not use similar interventions; some studies used an educational intervention only while others used contact intervention only. Some studies used the combination of both education contact interventions. This led to the heterogeneity among the interventions.

The homogeneity of the interventions' outcomes was found among a group of studies:

- An increase in mental health knowledge
- A positive change in negative beliefs about people with mental disorders being unpredictable and dangerous
- A decrease in negative attitudes such fear and avoidance of people with mental disorders, social distance from people with mental disorders

An intervention used in one study could have more than one outcome. A positive change in participants' negative attitudes towards people with mental disorders was

reported by 12 (44.4%) of the 27 studies; however, these attitudes were not specified. A positive change in participants' negative attitudes associated with social distance from people with mental disorders was reported by 16 (59.2%), fear of people with mental disorders by five studies (18.5%).

With regard to the beliefs, a positive change in participants' negative belief about people with mental disorders being unpredictable was reported by four studies (14.8%) and being dangerous by eight (29.6%) of the 27 included studies.

6.2 Discussion

The findings of this review identified that the educational intervention, contact intervention, and the combination of educational and contact interventions were useful to reduce health care providers' stigma towards people with mental disorders. The findings showed that 25 (92.6%) of 27 studies looked at interventions for health care profession students (see Tables 6.2, 6.3, 6.4). This review identified a gap in studies that investigated interventions to reduce practicing health care providers' mental health stigma. The fact that studies focused on health care profession students contributed to the need for them to undergo mental health training and stigma reduction prior to their registration as practicing health care professionals. The students exposed to stigma reduction interventions can contribute to mental health anti-stigma and improve mental health care services in future.

This review found that the interventions targeted three components namely mental health knowledge, beliefs and attitudes that needed improvements towards mental health stigma reduction. These components were also highlighted in a study conducted in Spain to reduce mental health stigma among PHC providers (Eiroa-Orosa et al., 2021).

6.2.1 Educational intervention

The findings of this review showed that six (22.2%) of 27 studies that met inclusion criteria used educational interventions to reduce mental health stigma among health care profession students (Aggarwal, Thompson, Falik, Shaw, O'Sullivan & Lowenstein, 2013; Byrne, Platania-Phung, Happell, Harris & Bradshaw, 2014; Douglass & Moy, 2019; Iheanacho, Marienfeld, Stefanovics & Rosenheck, 2014; Muzyk, Lentz, Green, Fuller, May & Roukema, 2017). One of the six studies used educational intervention to reduce mental health stigma among practicing health care providers and improve their mental health knowledge and reduced their negative attitudes (Li, Li, Huang & Thornicroft, 2014a). The findings of this review showed that the educational intervention was effective in reducing stigma towards people with mental disorders. These findings are consistent with another review that reported the positive effect of mental health training in reducing mental health stigma (Zamorano, Sáez-Alonso, González-Sanguino & Muñoz, 2023).

This review found that the educational intervention increased nurses, pharmacists and clinicians' mental health knowledge yielding a positive change in their beliefs and attitudes towards mental disorders in a short term (Li et al., 2014a). This finding is consistent with the statement of Whitelaw et al. (2023) who ascertained that the educational intervention improves people's mental health knowledge. Moreover, this finding is supported by a review indicating that an educational intervention improved community health workers' mental health knowledge in India (Kaur et al., 2021).

This review showed that the educational interventions in five (18.5%) of 27 studies that met inclusion criteria consisted of mental health courses/modules on mental disorders (Byrne et al., 2014; Douglass & Moy, 2019; Iheanacho et al., 2014, Li et al., 2014a; Muzyk et al., 2017). The mental health courses/modules incorporated basic

information about mental disorders and related stigma. In one study, the educational intervention consisted of a two-hour mental health session in which students shared information about their own experience of mental disorders during discussions (Aggarwal et al., 2013).

The findings of this review indicated that the educational intervention reduced mental health stigma. For instance, medical students completed a questionnaire before they attended a two-hour mental health session and completed the same questionnaire a week after the session. There was an increase in their willingness to care for people with mental disorders (Aggarwal et al., 2013). Moreover, a decrease in fear and rejection of mental disorders, and a decrease in blaming behaviour towards them were noted in medical, pharmacy and nursing students, and primary community mental health staff at the end of the mental health course (Byrne et al., 2014; Li et al., 2014a; Muzyk et al., 2017). As there were no studies on the long-term effectiveness of the educational intervention, it was suggested that regular educational interventions in caring environment should be implemented (Saguem, Ouanes, Rhouma & Nakhli, 2022).

The findings of this review are supported by other studies. For instance, an educational intervention reduced medical students' negative attitudes in Portugal (Vilar Queirós et al., 2021) and nurses' negative attitudes in the USA (Walker et al., 2022). Similarly, a study undertaken in China by Zhang et al. (2022) showed that the educational intervention including an introduction to mental disorders, symptoms and treatment increased primary health care providers' mental health knowledge and decreased their negative attitudes towards people with mental disorders. It was noted that although the educational interventions could reduce stigma towards people with mental disorders and improve positive attitudes, the duration of the effect was not a long-term

positive change. For instance, the study by Zhang et al. (2022) found that the effect of the educational intervention was for a short-term. In a study undertaken in Tunisia, family medicine trainees received an educational intervention comprising of discussions on the terminology of mental disorders, myths surrounding it, and mental health stigma in caring environment, and recovery (Saguem et al., 2022). The findings showed that there was a positive change in the trainees' negative attitudes towards people with mental disorders immediately after the intervention and two months thereafter (Saguem et al., 2022). Consistent with these findings, Stubbs (2014) stated that there was no evidence for the effect of educational intervention in reducing mental health stigma over the long-term.

6.2.2 Contact intervention

The findings of this review indicated that six (22.2%) of 27 studies that met inclusion criteria used contact interventions to reduce mental health stigma. Furthermore, the findings revealed that two types of contact interventions. Those types refer to the direct contact intervention (face-to-face contact between intervention recipients and people with mental disorders) and indirect contact intervention (recipients watching videos or films of people in recovery from mental disorders sharing stories of their lived experience of mental disorder and related stigma). These findings are consistent with the findings from a review that showed that the indirect social contact used videos or films while direct social contact involved people with lived experiences of mental disorders (Carrara, Fernandes, Bobbili & Ventura, 2021).

The direct contact interventions such as students' clinical placement in mental health institutions or workshop (recovery camp or sessions) were used to change students' negative beliefs and attitudes. In the workshops, people in recovery from mental disorders shared their experience of mental disorder and related stigma with students

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(Moxham et al., 2016; Patten et al., 2012). These interventions reduced students' negative attitudes such as social distance from people with mental disorders. Supporting these findings, a study was conducted in China using a direct contact intervention composed of a session in which people in recovery from mental disorders shared their experience of mental disorder with PHC providers (Zhang et al., 2022). The PHC providers completed a questionnaire before and after the session, the intervention reduced their negative attitudes towards people with mental disorders. Similarly, the findings of the study conducted by Zamorano et al. (2023) showed that the exposure of health care providers to people with mental disorders reduced their mental health stigma.

Regarding the indirect contact interventions, the findings of this study showed that students watched videos of people with mental disorders sharing their lived experience. These indirect contact interventions (watching videos) were used alone in three (11.1%) of 27 studies included in this review and led to a positive change in students' negative beliefs and attitudes towards people with mental disorders. In this review, the findings indicated that the use of videos led to a positive change in psychology students' negative beliefs and attitudes towards mental disorders (Thonon et al., 2016; Brown, 2019). Similarly, a positive change in practising health care professionals' negative beliefs about mental disorders was seen after they attended a one-hour 'Recovery Speaks' performance (Flanagan, Buck, Gamble, Hunter, Sewell & Davidson, 2016). Similar findings were noted in the systematic review conducted by Makhmud et al. (2022) and in which caregivers and health care providers watched videos of stories narrated by people with experience of mental disorders.

Studies have shown that the individuals' exposure to people with mental disorders led to a positive change in negative beliefs and attitudes towards them (Abuhammad,

Hatamleh, Howard & Ahmad, 2019; Aflakseir, Esini, Goodarzi & Molazadeh, 2019). However, this review did not find studies in which contact interventions increased mental health knowledge.

6.2.3 Combination of educational and contact interventions

The findings of this review showed that the combination of educational and contact interventions were used in 15 (55.5%) of 27 studies that met inclusion criteria. This means that the majority of the studies used the combination so that both interventions complemented each other in the effective reduction of mental health stigma. Similarly, another review's findings showed that a few studies involved educational interventions without contact interventions (Carrara et al., 2021). The fact that studies used the combination might be based on the integration of mental health knowledge into practice. Therefore, the combination of educational and contact interventions might be the intervention of choice as educational intervention and contact intervention are complementary to each other. They can fill the gap between mental health knowledge and practice. Supporting this argument, a review found that combined educational and contact interventions were more effective than just educational intervention or just contact intervention in reducing mental health stigma among health care providers (Maiorano, Lasalvia, Sampogna, Pocai, Ruggeri & Henderson, 2017).

In this review, the intervention recipients used in the abovementioned 15 studies were medical, nursing, pharmacy, psychology and social work students. There were no studies that combined educational and contact interventions to reduce mental health stigma among practicing health care providers. The fact that studies focused on the students, might be aligned with the training of the future practicing health care providers who are registered for mental health modules in their curricula. Supporting

this statement, five (18.5%) of the 27 studies used the lectures and clinical placements as interventions to reduce students' mental health stigma.

An improvement in mental health knowledge contributes mental health stigma reduction (Ayano et al., 2017). The mental health courses/modules focused on causes, symptoms and treatments for common disorders such as depression, anxiety disorders, psychosis and substance use disorder and schizophrenia (O'Reilly, Bell, Kelly & Chen, 2011; Bamgbade, Barner & Ford, 2017). The educational interventions were combined with direct (Bingham & O'Brien, 2018; Amsalem et al., 2019) or indirect contact interventions (Clement et al., 2012; Fernandez, Tan, Knaak, Chew & Ghazali, 2016). The findings of this review showed that the combination of educational and contact interventions improved mental health knowledge among pharmacy and medical students (Friedrich, Evans-Lacko, London, Rhydderch, Henderson & Thornicroft, 2013; Bamgbade, Ford & Barner, 2016; O'Reilly et al., 2011).

The findings also showed that the combined educational and contact interventions reduced negative beliefs of nursing, pharmacy and psychology students about people with mental disorders seen as dangerous and unpredictable (Magliano et al., 2016; Duman, Günüşen, İnan, Ince & Sari, 2017; Inan et al., 2019; Strassle, 2018). Moreover, this combination decreased medical, nursing, pharmacy, psychology and social work students' negative attitudes such as social distance from people with mental disorders (Fernandez et al., 2016; Economou et al., 2017; Inan et al., 2019, O'Reilly et al., 2011; Mann & Himelein, 2008; Rubio-Valera et al., 2018). In general, the effect of combination of educational and contact interventions was limited to the short term. However, a follow-up was undertaken on the effect of this combination on mental health stigma among social work students and the effect was found to be sustained at three-month following the intervention (Rubio-Valera et al., 2018). Similar

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to this finding, a review conducted on health care providers and general public found that the effect of the combined interventions on mental health stigma reduction were within a short-term, medium-term and long-term (Vielma-Aguilera, Castro-Alzate, Saldivia Bórquez & Grandón-Fernández, 2021).

6.2.4 Conclusion

This review did not find studies that investigated the effect of the protest interventions. Owing to the fact that the studies focused mostly on reducing health care profession students' mental health stigma, follow-up studies on the sustainability of intervention effectiveness over the years were not conducted. The findings of this review indicated that the interventions were effective in mental health stigma reduction over a short-term. These findings are consistent with the statement of Gronholm et al. (2017) who ascertained that there is limited evidence of the long-term impact of contact interventions on mental health stigma reduction. Similarly, a review undertaken by Carrara et al. (2021) found that the combination of educational and contact interventions had a positive impact on mental health stigma reduction for a short period. Moreover, the findings of the review conducted by Sreeram, Cross and Townsin (2022) reported the positive effect of interventions on health care providers' attitudes towards mental disorders for a short period. In this regard, investigations of the effects of interventions in the longer term are needed to ensure their sustainability (Morgan et al., 2018). This review also identified the need for more research on interventions' effects on mental health stigma among health care providers.

The next chapter presents the synthesis of evidence from empirical studies and systematic review.

SUMMARY OF THE FINDINGS FROM THREE STUDIES

7.1 Introduction

This chapter presents the summary of the key findings. It presents the list of key findings from quantitative and qualitative studies and systematic review. It also presents the triangulation of the findings from the three studies and conclusion of the chapter.

7.2 Summary of the key findings from the three studies

The key findings from the quantitative and qualitative studies, and systematic review are summarised below.

7.2.1 Survey key findings

1) A total of 139 (59.4%) of PHC nurses were knowledgeable about common mental disorders in terms of their definitions and symptoms of (≥ 80% scores).

2) Nurses' mental health knowledge scores were associated with higher levels of education. In comparing the nursing categories included in the quantitative study (step one of phase one), RNs had significantly higher mental health knowledge scores (17.0 out 20) than ENs who scored 13.7 out 20 and ENAs who scored 13.4 out of 20 (p=.001). Moreover, 104 (74.3%) of 140 RNs who participated in the quantitative study were knowledgeable, 18 (40.9%) of 44 ENs were knowledgeable while 17 (34.0%) of 50 ENAs were knowledgeable. These findings indicated that the mental health training played a significant role in improving mental health knowledge.

3) In assessing the influence of prior exposure to people with mental disorders on mental health knowledge, nurse respondents with prior exposure had significantly

higher mental health knowledge scores (16.2 out 20) than the respondents who had either not attended (12.3 out 20). Nurse respondents who had previously provided care for people with mental disorders scored 16.1 out 20 while those who did not scored 13.0 out 20 (p<.001). These findings indicated that nurses' exposure to people with mental disorders improved mental health knowledge.

4) Nurses' low levels of mental health knowledge: 150 (64.1%) were not knowledgeable about the definition of dysthymia (persistent depressive disorder) which is one type of depressive disorders, most common in South Africa.

5) Nurses' high levels of negative belief: people with mental disorders are unpredictable (134, 57.3%) and dangerous (115, 49.1%), they should be denied their individual rights (84, 35.9%). A total of 48 (20.5%) were uncertain of aggression in people with mental disorders while 67 (28.6%) agreed.

6) Nurses' lower levels of belief scores (lower level of agreement with the statement) indicating positive belief were associated with higher levels of education: significant differences between the nursing categories with RNs having significantly lower negative beliefs mean scores (2.12, sd 0.42) compared to ENs (2.39, sd 0.43) and ENAs (2.46, sd 0.47) (p<.001) were noted. These findings indicated that nurses' acquisition of mental health knowledge yields a positive change in negative belief about people with mental disorders. This change is supported by Corrigan's cognitive stigma model (2000) that explains how the accurate information on people with mental disorders helps individuals to change their negative beliefs about them, thus reducing stigma. Moreover, the positive belief score resulting from the acquisition of mental health knowledge thus reducing stigma is supported by Weiner's attributional theory (1985) that explains that individuals strive to know the causes of an event or situation towards the knowledge of responsibility,

controllability and stability of people experiencing that event such as a mental disorder.

7) Nurses' lower levels of belief scores (higher level of disagreement with the statement) indicating positive belief were also associated with prior exposure to the people with mental disorders: respondents with prior exposure had significantly lower belief mean scores (2.2, sd 0.45) than the respondents who have not either attended (2.5, sd 0.41) (p<.000). These findings indicated that nurses gained an opportunity to learn about mental disorders and acquire the skills in managing people with mental disorders through a long experience of caring for them. Hence, nurses' exposure to the people with mental disorders helps them gain accurate facts about mental disorders and reduces their stigma.

8) Nurses' high levels of negative attitude was reported among nurses: 98 (41.9%) of the respondents reported nurses' frustration while caring for people with mental disorders and 33 (14.1%) were uncertain; 86 (36.8%) reported nurses' fear of people with mental disorders while 26 (11.1%) were uncertain.

7.2.2 Qualitative key findings

1) Nurse participants possessed knowledge of definitions of mental health stigma. These findings are not surprising because the majority of the participants were registered nurses with backgrounds in mental health training either at undergraduate or postgraduate level. This indicates that they were knowledgeable about mental disorders due to their higher level of education.

2) Nurse participants had knowledge of the causes of mental health stigma.

3) Nurse participants had knowledge of the consequences of stigma on the lives of people with mental disorders.

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4) Nurse participants explained that nurses' negative beliefs that people with mental disorders were not like normal people.

5) PHC nurses' negative believe that people with mental disorders are unpredictable, aggressive, and dangerous.

6) Nurse participants reported the following attitudes of nurses:

- Non-mental health nurses feel frustrated while caring for people with mental disorders

- Non-mental health nurses fear people with mental disorders

- Non-mental health nurses' social distance from people with mental disorders

- Non-mental health nurses are reluctant to care for people with mental disorders

- Non-mental health nurses avoid people with mental disorders

- Non-mental health nurses label people with mental disorders as crazy or mad

- Non-mental health nurses do not listen to people with mental disorders, they send them home when a mental health nurse is out of the office

- Non-mental health nurses assign people with mental disorders to a mental health nurse

7.2.3 Systematic review key findings

1) Educational intervention was effective in reducing mental health stigma:

- The health care providers amongst nurses attended mental health training; as a result, there was an increase in mental health knowledge, a positive change in their negative beliefs and attitudes towards people with mental disorders

2) Contact intervention was effective in reducing health care providers' mental health stigma:

- By caring for the people with mental disorders in health care facilities

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- By attending a workshop in which people with mental disorders in recovery state shared their experience of mental disorder and related stigma

- By watching videos displaying the testimonies of people with mental disorders in recovery state sharing their experience of mental disorder and related stigma

- The exposure of the health care providers to people with mental disorders yielded an increased knowledge of mental health and stigma, a positive change in their negative beliefs and attitudes towards people with mental disorders

3) The combination of educational intervention and contact intervention were effective in reducing mental health stigma. The health care providers amongst nurses who attended mental health training (theoretical learning) cared for the people with mental disorders (practical learning) or attended a workshop with them or watched videos about them.

- The integrated learning based on the combination of the above interventions increased mental health knowledge among the health care providers. Moreover, there was a positive change in their negative beliefs and attitudes towards people with mental disorders

The summary of the key findings is presented in a form of table (Table 7.1).

Table 7.1: Summary of the key findings

Aspects	Survey results	Interviews findings	Systematic review findings	Concluding statement
Mental health knowledge: **(**Objective 1.5.1: To determine PHC nurses' levels of knowledge about mental disorders)	• Low levels of knowledge: definitions and symptoms of psychosis, dysthymia and dementia • Higher levels of education was associated with higher levels of mental health knowledge: definition and symptoms of common disorders • Higher levels of mental health knowledge (definition and symptoms of common disorders) is associated with the previous exposure to people with mental disorders	• Nurses' lack of mental health knowledge resulting in negative beliefs and attitudes (mental health stigma)		• Non-mental health PHC nurses have low levels of mental health knowledge • Higher levels of mental health knowledge are associated with higher levels of education or the previous exposure to people with mental disorders. This is an evidence of the positive impact of mental health training or exposure on improvement of mental health knowledge

Aspects	Nurses survey results	Nurse interviews findings	Systematic review findings	Concluding statement
Beliefs about people with mental disorders: (Objective 1.5.2: To assess PHC nurses' beliefs about mental disorders and people with mental disorders)	• Nurses' negative belief about people with mental disorders being unpredictable, aggressive and dangerous • Lower levels of negative belief are associated with higher levels of education (RNs had lower negative belief than ENs and ENAs) • Lower levels of negative belief are associated with longer exposure to people with mental disorders	Non-mental health nurses' negative beliefs: • People with mental disorders are unpredictable, aggressive, and dangerous • They are not normal like patients with medical conditions		• Non-mental health nurses believe that people with mental disorders are unpredictable, aggressive and dangerous • Lack of mental health training influence negative beliefs about people with mental disorders

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Aspects	Nurses survey results	Nurse interviews findings	Systematic review findings	Concluding statement
Attitudes towards people with mental disorders: (Objective 1.5.3: To determine PHC nurses' attitudes towards mental disorder and people with mental disorders)	• Nurses' frustration and anger caused by caring for people with mental disorders • Nurses' fear of people with mental disorders. • Nurses' social distance from people with mental disorders	Non-mental health nurses' negative attitudes: • Fear and frustration caused by caring for people with mental disorders • Social distance from people with mental disorders • Not listening to the complaints of people with mental disorders • Labelling of people with mental disorders • Sending people with mental disorders home when a mental health nurse is not available at PHC facility		• Non-mental health PHC nurses have fear and frustration while caring for people with mental disorders; thus, certain nurses avoid or keep social distance from them, and are not willing to listen to them

Aspects	Nurses survey results	Nurses interviews findings	Systematic review findings	Concluding statement
Understanding of mental health stigma and reduction: (Objective 1.5.4: To explore mental health stigma and its reduction at PHC services among nurses working at PHC facilities)		• Nurses' mental health stigma consists of their negative beliefs and attitudes towards people with mental disorders • People with mental disorders suffer from discrimination. Certain nurses do not want to care for them • Mental health stigma prevents people with mental disorders from seeking professional help • Mental health training for nurses is needed to reduce mental health stigma		• People with mental disorders suffer from stigma at PHC facilities: nurses discriminate against them, are not interested in mental health care • Mental health training for nurses can reduce mental health stigma

Aspects	Nurses survey results	Nurses interviews findings	Systematic review findings	Concluding statement
Existing interventions to reduce mental health stigma (Objective 1.5.5: To identify and review existing effective interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment)			• Educational intervention, and contact intervention are effective in reducing mental health stigma among health care providers • The combination of educational and contact interventions are more effective in reducing mental health stigma among health care providers	• Educational intervention, contact intervention (exposure to people with mental disorders) or the combination of both interventions can increase mental knowledge, and yield a positive change in nurses' negative beliefs and attitudes towards people with mental disorders

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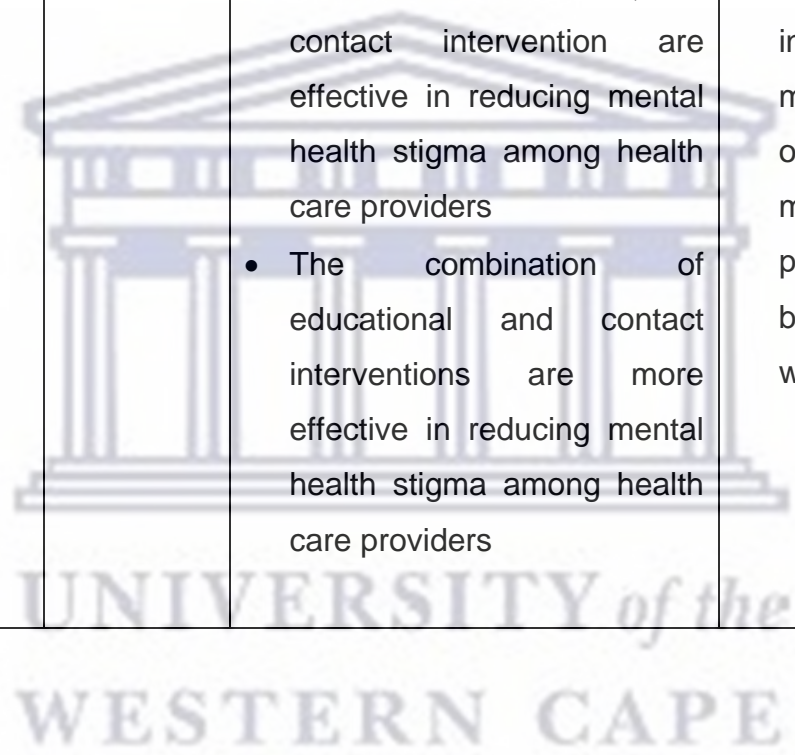
7.3 Triangulation of the findings from the three phases

Data triangulation is based on the collection of data from multiple sources (Fusch, Fusch & Ness, 2018; Campbell, Goodman-Williams, Feeney & Fehler-Cabral, 2020). The collected data from the quantitative and qualitative studies had similarities; hence, the findings from both studies were complementary each other. Besides the similarities of the findings, in-depth data collected in the qualitative study elicited more understanding about objective 1.5.4 in terms of mental health stigma reduction.

The triangulated data are related to nurses' levels of mental health knowledge, their beliefs and attitudes towards people with mental disorders (Table 7.2). By applying the triangulation of the data, the researcher identified the key findings that are similar which helps to formulate a concluding statement for the development of the intervention. The following similarities of the findings from quantitative and qualitative studies were compared:

1) Both studies reported non-mental health nurses' lack of mental health knowledge.

2) Both studies reported nurses' negative beliefs: people with mental disorders are unpredictable, aggressive and dangerous.

3) Findings from both studies show that nurses had frustration and fear caused by caring for people with mental disorders.

4) Nurses' attitudes are reported in qualitative study: negative attitudes such as social distance from people with mental disorders, labelling, not interested in listening and assisting people with mental disorders and sending them back home when a mental health nurse is not available.

The data collected from the systematic review were useful to answer the objective 1.5.5 in terms of effective interventions that have been used for health care providers to reduce mental health stigma. The findings from the systematic review showed that there are effective interventions that can be used to increase mental health knowledge, change negative beliefs and attitudes. Table 7.2 depicts the triangulation of the data collected from the three studies.

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Table 7.2: Triangulation of the findings from the three studies

Objectives	Quantitative study results	Qualitative study findings	Systematic review findings	Concluding statement
(Objective 1.5.1). To determine PHC nurses' levels of knowledge about mental disorders	PHC nurses lack mental health knowledge and exposure improves mental health knowledge	Non-mental health nurses lack mental health knowledge causing mental health stigma	Educational intervention, contact intervention, combination of both interventions	Non-mental health PHC nurses lack mental health knowledge, which can be improved using the existing interventions
(Objective 1.5.2). To assess PHC nurses' beliefs about mental disorders and people with mental disorders	Nurses' negative beliefs about unpredictability, aggression and dangerousness of people with mental disorders	Non-mental health nurses' negative beliefs about the unpredictability, aggression and dangerousness of people with mental disorders	improve mental health knowledge. These interventions are useful to change nurses' negative beliefs and attitudes towards people with mental disorders	In both studies (quantitative and qualitative studies, nurses have negative beliefs: people with mental disorders are unpredictable, aggressive and dangerous. The existing interventions can be used to change the negative beliefs

Objectives	Quantitative study results	Qualitative study findings	Systematic review findings	Concluding statement
(Objective 1.5.3). To determine PHC nurses' attitudes towards mental disorder and people with mental disorders	PHC nurses' negative attitudes towards people with mental disorders: fear and frustration, social distance	• Non-mental health nurses' negative attitudes towards people with mental disorders: fear, frustration, social distance, labelling	The review findings show that education and contact are the intervention to change negative attitudes	Non-mental health PHC nurses hold negative attitudes to people with mental disorders: fear, frustration, social distance. The review findings indicate that nurse's negative attitudes arise out of a lack of mental health education and exposure to people with mental health condition

Objectives	Quantitative study results	Qualitative study findings	Systematic review findings	Concluding statement
(Objective 1.5.4). To explore mental health stigma and its reduction at PHC services among nurses working at PHC facilities		Negative beliefs and negative attitudes of PHC nurses, leading to discrimination against people with mental disorders	Lack of mental health knowledge is the core cause of negative beliefs and negative attitudes	At PHC facility level, mental health stigma among nurses consists of negative beliefs and attitudes towards people with mental disorders due to a lack of mental health knowledge
(Objective 1.5.5). To identify and review existing effective interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment			The following interventions are effective in mental health stigma reduction: • educational intervention • contact intervention) • a combination of both educational and contact interventions	Mental health training (acquisition of mental health knowledge: theoretical learning) and exposure to people with mental disorders (practical learning) are useful to reduce mental health stigma

7.4 Conclusion

This chapter presented a summary of the findings from the three studies and a triangulation of the findings. The similarities were found among the findings from quantitative and qualitative studies. Both studies found that PHC nurses had a lack of mental health knowledge and had negative beliefs and attitudes towards people with mental disorders. The findings from the systematic review revealed that the educational intervention, the contact intervention, and the combination of both educational and contact interventions were effective in improving mental health knowledge and reducing negative beliefs and attitudes.

The next chapter presents the process of protocol design and development.

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CHAPTER EIGHT

DEVELOPMENT PROCESS OF THE PROTOCOL

8.1 Introduction

The preceding chapters, chapter four, five and six, presented the findings from the quantitative and qualitative studies (Phase one), and systematic review (Phase two) respectively. Phases one and two of the Intervention Research design and development (IR: D&D) model (Rothman & Thomas, 1994) were executed in chapters four, five and six. Chapter seven presents the summary and triangulation of the findings from the three studies.

Chapter eight (Phase three) presents the design and development of the protocol. The protocol was developed following phase three and four (design and development) of IR: D&D model (Rothman & Thomas, 1994) and using the Nominal Group Techniques (NGT) (Harvey & Holmes, 2012). The objective of this phase was to develop a protocol for PHC nurses to reduce mental health stigma at PHC services.

Based on Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000), mental health stigma results from a lack of mental health knowledge and from negative beliefs about people with mental disorders. Based on Corrigan's cognitive stigma model (2000), the behaviour of people with mental disorders serves as a stigma signal that triggers an individual's preconceptions about them, which leads to his/her attitudes towards them.

The synthesised findings from the quantitative and qualitative studies showed that PHC nurses lack knowledge about mental disorders and hold negative beliefs and attitudes towards people with mental disorders. The findings from the systematic review indicated that the educational intervention, contact intervention, and the combination of educational

and contact interventions are effective in reducing mental health stigma. The IR: D&D model was used as a framework to design and develop the protocol for PHC nurses to reduce stigma towards mental health care users (MHCU). To reduce PHC nurses' mental health stigma, it is suggested that they attend mental health training consisting of the basic introduction to the common mental disorders and stigma, introduction to Mental Health Care Act 17 of 2002, and management of aggression. Moreover, PHC nurses need contact with MHCU; meaning an exposure to and familiarisation with them. Learning the above-mentioned topics and exposure to MHCU would increase PHC nurses' mental health knowledge, decrease their negative beliefs and attitudes towards MHCU. Table 8.1 summarises the application of IR: D&D model (Rothman & Thomas, 1994), and the theoretical framework of Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000). It also summarises the key findings from the quantitative and qualitative studies, the key findings from the systematic review, and presents the concluding statements.
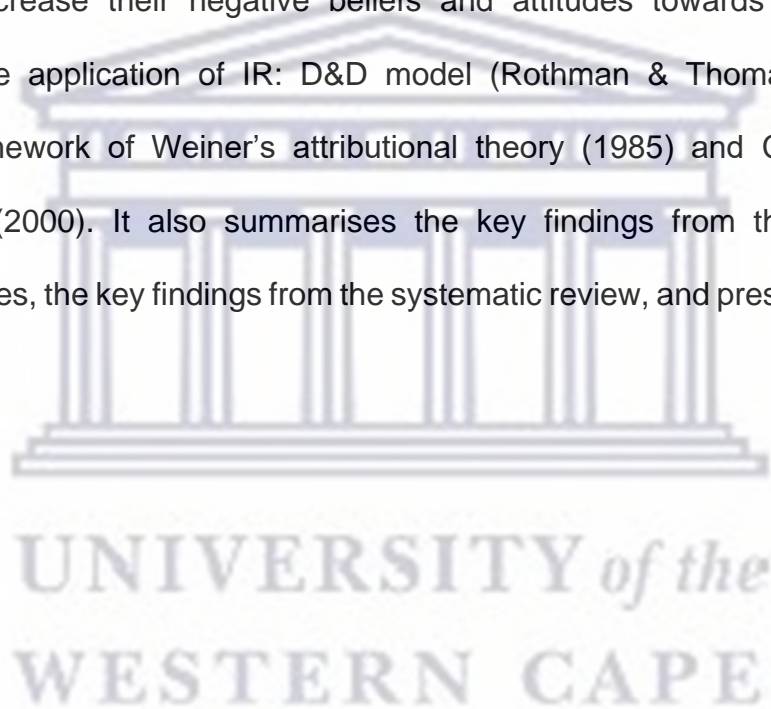
Table 8.1: Summary of the key findings

IR: D&D model (Rothman & Thomas, 1994)	Theoretical framework: Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000)	Summary of the results from the quantitative study	Summary of the findings from the qualitative study	Summary of the findings from the systematic review	Concluding statement
Phase three and four: Design and development	Knowledge: • Weiner's attributional theory (1985) focuses on the knowledge of causes of mental disorders leading to either the internal or external attribution • Corrigan's cognitive stigma model (2000): Mental health stigma results	Nurses' lack of knowledge of definition, signs and symptoms of common mental disorders	Lack of mental health knowledge causes mental health stigma consisting of social isolation, negative beliefs, labelling, individuals' lack of interest in understanding people with mental disorders and discrimination against them	Interventions used to reduce mental health stigma by increasing mental health knowledge, yielding a positive change in negative beliefs and attitudes:	• Negative beliefs and attitudes towards people with mental disorders results from a lack of knowledge about mental health disorder • Nurses' negative beliefs result from the belief that people with mental disorders are

	from a lack of inaccurate knowledge of mental disorders			• Combination of educational and contact interventions • Educational intervention • Contact intervention	unpredictable, aggressive and dangerous • Nurses' negative attitudes towards people with mental disorders arise from frustration and fear. However, the qualitative findings also revealed nurses' negative attitudes such as labelling, social distance, ignorance, sending mental health care users away when a mental health nurse is not
	Beliefs: • Weiner's attributional theory (1985): Knowledge of causes of mental disorders leads to either the internal or external attribution • Corrigan's cognitive stigma model (2000): Individuals' negative beliefs are triggered when they	Nurses' negative beliefs about people with mental disorders: • Unpredictability • Aggression • Dangerousness	Nurses' negative beliefs about people with mental disorders: • Unpredictability, • Aggression • Dangerousness • They are not the same as normal people		

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				available at the PHC facility
	see people with mental disorders			.
	Attitudes • Corrigan's cognitive stigma model (2000): Nurses' lack of mental health knowledge and negative beliefs lead to negative attitudes towards people with mental disorders	Nurses' negative attitudes such as the fear of people with mental disorders and frustration caused by dealing with people with mental disorders	• Nurses label people with mental disorders • Nurses ignore people with mental disorders, do not listen to people with mental disorders • Nurses' fear, frustration, social distance, reluctance to care • Sending people with mental disorders away from the PHC facility when a mental health nurse is not available	

8.2 Design and development of the protocol

This section presents the process of the protocol development following phases three and four of IR: D&D (Rothman &Thomas, 1994) model. The initial draft of the protocol was developed using the findings of the study, and the draft design of the protocol and summary of the findings was presented to the NGT participants to develop the final product of the protocol.

8.2.1 Initial development of the protocol

The draft of the protocol was designed based on the synthesized findings from the quantitative and qualitative studies (Phase one), and systematic review (Phase two). The draft of the protocol has a background, aim, objectives, rationale, scope, principles, strategies, focus of the protocol, mental health training topics, and the expected outcomes. The aim of the protocol is to provide guidelines to PHC nurses to reduce stigma towards MHCU. The objectives of the protocol are to guide PHC nurses on the needs of mental health training towards mental health stigma reduction; to advocate for the representation of MHCU in the relevant levels associated with mental health services delivery towards their participation in decision-making, equal treatment and stigma reduction and recommend the implementation of mental health stigma reduction protocol.

The rationale of this protocol is to demonstrate the guidelines to reduce PHC nurses' mental health stigma and ensure that the voice of MHCU is heard. Regarding the scope of the protocol, it is designed for PHC nurses in the South African context. The following principles underpinning the protocol were developed: This protocol should be seen as a guide to reduce mental health stigma among PHC nurses and can be revised as the need arises by a responsible body and/or policy makers and

researchers. Another principle is to recommend that all PHC nurses have basic knowledge about mental health and related stigma, and exposure to MHCU. The protocol also addresses PHC nurse's awareness about the language and action attached to mental health stigma. The focus of the protocol is to improve the mental health knowledge, reduce negative beliefs and attitudes of PHC nurses towards MHCU. The topics included in the mental health training were developed based on the findings from the study, modified and accepted by NGT's participants. The expected outcomes of the protocol are the reduction of stigma towards MHCU at PHC services.

8.2.2 Nominal group technique

The nominal group technique (NGT) was used to develop the protocol. The NGT is a method that employs a structured discussion among small group members to reach a consensus (Manera, Hanson, Gutman & Tong, 2019; Mason et al., 2021). The NGT consists of five steps namely the introduction, silent generation of ideas, round robin, group discussion, voting and ranking (Harvey & Holmes, 2012). It is useful for discussion of ideas in a structured manner, voting and ranking of ideas (Manera et al., 2019; Davies, McGain & Francis, 2023). It is usually conducted using a face-to-face meeting (Humphrey-Murto et al., 2023); however, it can also be conducted using an online platform, for example when restrictions such as when the COVID pandemic prevailed (Mason et al., 2021; Michel et al., 2021; Giuliani et al., 2023; Humphrey-Murto et al., 2023).

In normal circumstances, a draft protocol can be sent to the participants for reading before a workshop occurs especially when it has an extensive content (Bateman, Saunders, Littlewood & Hill, 2021). A virtual NGT workshop is useful for reaching a consensus at distance (Tseng, Lou, Diez & Yang, 2006), it can be advantageous as a face-to-face workshop when it is carefully planned (Mason et al., 2021). The NGT

workshop has recently moved to a virtual workshop due to the COVID-19 pandemic restrictions (Bateman et al., 2021; Humphrey-Murto et al., 2023).

8.2.2.1 Population sampling and sample

The population consisted of PHC nurses and district psychiatrists. A purposive sampling technique was used to select participants known as NGT experts, and the selection was based on the following inclusion criteria:

1) The experts included registered nurses with a mental health training background in the undergraduate programme and who are managers of PHC facilities holding a diploma in primary health care.

2) The experts comprised PHC registered nurses who are mental health nurses holding at least a diploma in advanced psychiatric nursing. A mental health nurse has experience of caring for MHCU and is aware of mental health stigma. Moreover, the mental health nurses will facilitate mental health training and therefore, they need to be a part of the development of the protocol they will implement.

3) The experts also comprised district psychiatrists, a medical doctor with a specialty in mental health, qualified to assess a patient with physical or mental conditions. The district psychiatrists have experience in caring for MHCU at PHC facilities and are aware of mental health stigma.

Demographic information of NGT participants

The NGT participants included seven females and three males. The age mean was 48.4. Six participants were married while one was living with a partner, one was divorced and two were single. Six participants were mental health nurses, two were

PHC facility managers and two were psychiatrists. Table 8.2 illustrates the participants' demographic information related to specialty and designation.

Table 8.2: Demographic information

Participant	Specialty	Designation
Participant 01	Psychiatrist	District psychiatrist
Participant 02	Psychiatrist	District psychiatrist
Participant 03	Primary health care	Facility manager
Participant 04	Primary health care.	Facility manager
Participant 05	Advanced psychiatric nursing	Mental health nurse
Participant 06	Advanced psychiatric nursing	Mental health nurse
Participant 07	Advanced psychiatric nursing	Mental health nurse
Participant 08	Advanced psychiatric nursing	Mental health nurse
Participant 09	Advanced psychiatric nursing	Mental health nurse
Participant 10	Advanced psychiatric nursing	Mental health nurse

8.2.2.2 Nominal group technique one

The first NGT was conducted in December 2022 at a private, quiet and safe venue in Cape Town. The researcher set up a U-shaped table with chairs, a laptop and a projector. A flip chart was installed at the open end of the table. On the day of the workshop, four participants sent apologies for not attending the workshop, but confirmed that they would attend the second NGT. Therefore, only six participants attended the first workshop. The researcher facilitated all the five NGT steps. The objective of the first NGT was to give out the individual ideas on the draft of the protocol and discuss them among the participants with the aim of reaching consensus on the development of the protocol.

i) Step 1: Introduction

The researcher presented a brief background of the study, the summary of findings from the three studies (quantitative, qualitative, and systematic review) and the draft

of the protocol. The researcher explained the objective of the workshop and the activities included in each of the five NGT steps. The researcher also explained that the next step would be used for reflection on the draft of the protocol, and generation of ideas towards the development of the final protocol for nurses to reduce stigma towards MHCU at PHC services. The discussions were held in English and were recorded with permission from the participants. This step lasted 30 minutes after which the researcher announced the beginning of the second NGT step.

ii) Step 2: Silent generation of ideas

After the introduction and the instruction about the NGT activities and procedures, the researcher gave the participants booklets and pens with which to write their reflections and ideas for hour using brief statements or sentences. Each participant was also given a document with the list of draft contents and statement under each point namely: aim of the protocol, objectives, rationale, scope, principles, strategies, and contents of mental health training. The main agenda and topics given to them were developing the protocol to reduce nurses' associated stigma towards MHCU. The participants were informed that they were not limited to the listed points and were requested to give any ideas in line with PHC nurses' mental health training and stigma reduction. The participants read the content of the draft of the protocol individually and silently wrote down their ideas in the booklets provided. During this time, they were not allowed to talk to each other which the researcher coordinated. This step lasted one hour before the researcher requested the participants to move to the third step.

iii) Step 3: Round robin

During the third step, each participant presented her/his ideas individually in a round robin (Vander Laenen, 2015). This step allowed each participant to equally present

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her/his ideas without explanations (Giuliani et al., 2023). The group members were not allowed to ask the presenter any question or discuss her/his ideas (Vander Laenen, 2015). The researcher coordinated this activity and recorded each participant's ideas on a flipchart using the participant's own statements or phrases (Vander Laenen, 2015). This activity lasted 30 minutes after which the participants were requested to move to the next step, a group discussion.

iv) Step 4: Group discussion

The fourth step focused on the clarification of the ideas that each participant presented in the third step (Giuliani et al., 2023). The researcher facilitated the discussions, ensuring that each participant had an equal opportunity to contribute to the discussions. The researcher encouraged the participants who were quiet to participate in the discussions that focused on the statements included in the draft of the protocol and the new ideas. The new ideas were associated with the rationale of the protocol, its scope, principles, strategies, and mental health training topics.

The following new idea related to the rationale of the protocol was generated by the participants:

- The protocol will make PHC nurses aware of existing mental health stigma and its impact on the lives of MHCU.

The following new ideas related to the scope of the protocol were generated by the participants:

1) The protocol is not intended for other members of multidisciplinary health team, allied health professionals or administrative staff.

2) It is not designed for nurses employed in private hospitals, public district and tertiary hospitals.

3) It provides the scope of mental health training limited to a basic introduction to the mental disorders and management, rights of MHCU and mental health stigma.

4) It is aimed at the improvement of PHC nurses' mental health knowledge and skill, changes in negative beliefs and attitudes towards MHCU.

The participants rephrased one of the principles underpinning the protocol as follows:

- This protocol recommends that all PHC nurses should have basic knowledge about mental health and related stigma and have exposure to MHCU. During mental health training, exposure of nurses to MHCU is crucial.

One of the strategies of the protocol was rephrased as follows:

- The managers of PHC facilities should ensure that PHC nurses receive a compulsory mental health training.

The participants added new topics: Definition of health and stigma, and appropriate referral pathways. They rephrased some statements related to mental health training topics (See table 8.3)

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Table 8.3: Mental health training topics

No	Mental health training topics presented	Mental health training topics amended as suggested by NGT participants
1	Definition of mental illness	Definition of mental illness
2	Introduction to mood disorders	A basic introduction to mood disorders
3	Introduction to depression	A basic introduction to depression including its definition, signs and symptoms, and management
4	Introduction to bipolar mood disorder	A basic introduction to bipolar mood disorder including its definition, signs and symptoms, and management
5	Introduction to anxiety disorders	A basic introduction to anxiety disorders including the definitions, signs and symptoms, and management
6	Introduction to psychotic disorders	A basic introduction to psychotic disorders including the definitions, signs and symptoms, and management
7	Introduction to substance use disorder	A basic introduction to substance use disorders including the definitions, signs and symptoms, and management
8	Introduction to neurocognitive disorders	A basic introduction to neurocognitive disorders including definitions, signs and symptoms, and management
9	Management of aggression	Management of aggression
10	Introduction to mental health stigma	Introduction to mental health stigma

11	Introduction to Mental Health Care Act 17 of 2002	Introduction to Mental Health Care Act 17 of 2002
12		Definition of health
13		Definition of stigma
14		Appropriate referral pathways

The participants had discussions on the new ideas that were generated in relation to mental health training delivery:

1) The delivery of mental health training is to be either in-service training or a short mental health course.

2) The mental health facilitator will be mental health nurses, with teaching experience in mental health courses.

3) The managers are to be part of PHC nurses' mental health training.

During the discussion step, the objective was not to eliminate any idea but to clarify and discuss the ideas. The clarification and discussions lasted for one hour after which the researcher ended this step and requested the participants to move to the fifth step (voting and ranking).

v) Step 5: Voting and ranking

The fifth NGT step involved 'voting and ranking'. The participants voted on the suggested amendments and the new contents based on the ideas generated during the fourth step that were to be incorporated into the draft of the protocol. The voting focused on the aim of the protocol, objectives, rationale, scope, principles, and strategies of the protocol. The participants voted on the statements which the researcher recorded. The following are the voting results for each main point:

Aim of the protocol

The researcher asked the participants to vote on the statement related to the aim by indicating "yes" to agree with the statement or "no" to disagree with the statement. All the participants had consensus on the aim statement "The aim of the protocol is to provide guidelines to PHC nurses to reduce stigma towards MHCU".

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Objectives of the protocol

The participants voted on the statements associated with the objectives of the protocol. They were requested to say "yes" to agree with the statement or "no" to disagree. All the participants agreed with the statements below:

1) To guide PHC nurses on the need of mental health training towards mental health stigma reduction.

2) To advocate for the representation of the MHCU in the relevant levels associated with mental health services delivery towards their participation in decision-making, equal treatment, and stigma reduction.

3) To recommend the implementation of relevant documents such as mental health stigma reduction protocol, which includes specifications for mental health training and incident reports on mental health stigma.

Rationale of the protocol

All the participants agreed to maintain the statements related to the rationale of the protocol:

1) This protocol will demonstrate the guidelines to reduce the primary health care nurses' stigma towards MHCU.

2) It serves as a guide for the managers of PHC facilities to monitor PHC nurses' mental health training attendance.

3) This protocol will ensure that the voice of MHCU is heard through their representation in the relevant committees towards the improvement of service delivery and mental health stigma reduction.

4) This protocol will make PHC nurses aware of existing mental health stigma and its impact on the lives of MHCU.

The scope of the protocol

The researcher requested the participants to vote for the statements associated with the scope of the protocol. These statements consisted of those included in the draft of the protocol and the statements from the ideas generated by the participants during the second step and discussed in the fourth step. They were requested to say "yes" to agree with the statement or "no" to disagree. All the participants agreed on the seven statements below:

1) The protocol is designed to reduce all nursing categories of PHC nurses' stigma towards MHCU.

2) The protocol is based on evidence from empirical studies and systematic review.

3) It is relevant to the South African context and will be regularly revised or when there is a need.

4) It is not designed for nurses employed in private hospitals, public district and tertiary hospitals.

5) It is aimed at the improvement of PHC nurses' mental health knowledge, changes in negative beliefs and attitudes towards MHCU.

6) It provides the scope of mental health training limited to a basic introduction to the mental disorders and management, rights of MHCU and mental health stigma.

7) It is not intended for other members of multidisciplinary health team, allied health professionals or administrative staff.

Principles underpinning the protocol

The participants voted to agree with the statement by saying "yes" to agree or "no" to disagree. All the participants agreed on the six statements below:

1) This protocol should be seen as a guide checklist to reduce mental health stigma.

2) The protocol is designed based on evidence from the empirical studies and systematic review and it is relevant to the South African context.

3) This protocol addresses mental health stigma reduction, and it is applicable to PHC nurses.

4) It should be revised on a regular basis based on the PHC facilities' needs.

5) This protocol recommends the voice of MHCU through their representation in the committees dealing with mental health services at all the levels.

6) This protocol recommends that all PHC nurses should have a basic knowledge about mental health and related stigma and must have exposure to MHCU.

Strategies of the protocol

The participants voted on the statements related to the strategies, they were requested to indicate whether they agreed or disagreed with the statement. All the participants had reached an agreement on nine statements below:

1) To reduce mental health stigma, PHC nurses should be aware of language and action attached to mental health stigma.

2) Incident reports on mental health stigma are to be introduced in the health care system.

3) A checklist will be used to monitor mental health training and exposure.

4) The community members attending services at PHC level will be aware that the existing boxes for complaints, compliments and suggestions can be used for mental health as well.

5) The managers of PHC facilities are to ensure that MHCU get treatment without discrimination.

6) The managers of PHC facilities should ensure that MHCU are treated in any of consultation offices/rooms used by professional nurses. Therefore, the culture of inclusiveness and openness should take place at PHC facilities. The integration of mental health services should be implemented into all consultation rooms.

7) The managers of PHC facilities should ensure that PHC nurses receive a compulsory introduction to mental health training.

8) The managers of PHC facilities should set the standard operating procedure (SOP), deal with stigma, support educational programme and lead by example.

9) The individual performance and development plan (IPDP) will be emphasised and the active participation of each nurse will be required.

The voting lasted 40 minutes, and the entire workshop lasted for three hours and 40 minutes. The first NGT was thus concluded. Thereafter the researcher informed the participants of the second NGT.

8.2.2.3. Nominal group technique two

The researcher refined the draft of the protocol based on the feedback and comments from the first NGT. The refined draft of the protocol was e-mailed to the first NGT participants for approval of the draft of the protocol. They were also invited to attend the second NGT. All the first NGT participants acknowledged the invitation and suggested a virtual NGT because of their heavy workloads in the work environment and limited travelling time. The four participants who by apology could not attend the first NGT were also invited. They agreed to attend the second NGT; however, two of them suggested a virtual NGT. The researcher e-mailed the refined draft of the protocol to the four participants for reading and giving their inputs for discussion during the second NGT. The researcher shared a Google Meet link with the ten participants

a day before the second workshop took place, and each participant confirmed access to the link. The workshop took place in the afternoon during the participants' free time and all the five NGT steps were applied in the second NGT.

i) Step 1: Introduction

The researcher explained to the participants the objective of the second workshop: To determine whether the revised draft of the protocol reflected their ideas on which they had reached consensus so that these ideas could be incorporated in the draft protocol in the first NGT and asked if there were any new ideas to be added. The researcher presented to the participants the revised draft of the protocol. The researcher explained the amendments made, information added, introduced the activities of the second NGT, and all the instructions to be followed. The first step lasted 30 minutes after which the researcher announced the beginning of the next step.

ii) Step 2: Silent generation of ideas

The participants were informed that they had 45 minutes to read the refined draft of the protocol. The first NGT participants had an opportunity to read and indicate whether this protocol included their ideas that they agreed on in the first NGT. They were also requested to write out new ideas. This step allowed the four participants who did not attend the first NGT to have an opportunity to put their ideas forward. The researcher requested them to make comments using short statements or generate any new ideas that they might since have thought of. The researcher asked them to remain online and checked in the chat column if any participant had raised any problem or needed to be readmitted to the meeting. The participants were requested to indicate in the chat column whether they had finished writing any new ideas.

The second step ended after 45 minutes, whereafter the researcher asked the participants to move to the next step.

iii) Step 3: Round robin

During this step, the researcher used a flipchart and marking pen to record each participant's feedback and new ideas. For ease of data collation during the round robin, a code was assigned to each participant who presented the feedback when it was her/his turn. The researcher recorded each participant's feedback and ideas on separate but corresponding coded pages of the flipchart.

The first NGT participants approved the draft of the revised protocol. However, the participants who had not attended the first NGT had comments on the scope of the protocol suggesting that the content of the topic should depend on the nursing scope of practice. They moved certain statements included in the strategies to the mental health training delivery section to which new ideas were added:

1) The in-service training will take place within the facility at a convenient time; the manager of the PHC facility will ensure that the training does not negatively affect the health care services delivery.

2) The manager of the PHC facility assisted by a mental health nurse will decide on the dates of the training and the duration of each session.

3) The mental health short course will take place outside the facility and will require more resources. The manager of the PHC facility will ensure that the mental health short course does not negatively affect the health care services delivery. The manager of the PHC facility assisted by a mental health nurse should compile of priority list for nurses who need to attend the course. Other nurses are to be accommodated by means of in-service training within the facility.

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4) There should be one mental health training session each month.

5) During mental health training, the exposure of nurses to MHCU is crucial.

This activity lasted 30 minutes whereafter the researcher invited the participants to proceed with the fourth NGT step.

iv) Step 4: Group discussion

The participants' discussions focused on the statements related to the scope of the protocol, strategies, mental health training topics, and mental health training delivery. Regarding the scope of the protocol, two participants supported the following statement "it provides the scope of mental health training limited to a basic introduction to the mental disorders and management, rights of MHCU and mental health stigma". However, they suggested that the following words should be added to the statement: "the content of the topic should depend on the nursing scope of practice". They also suggested that multidisciplinary health teams, allied health professionals or administrative staff employed at PHC should also undergo mental health training towards mental health stigma reduction.

The mental health training topics were renamed "Mental health training package". The discussion focused mainly on mental health training delivery. One participant suggested one mental health training session each month. Two participants suggested one mental health training session every three months while seven participants suggested one mental health training session every two months. The researcher moderated the discussions, the process of discussions and the recordings were the same as in the first workshop. This lasted 45 minutes whereafter the researcher announced the beginning of the fifth NGT step.

v) Step 5: Voting and ranking

The voting focused on the statements related to the scope of the protocol, strategies of the protocol and mental health training delivery. The voting and ranking focused on the mental health training package.

Scope of the protocol

The participants were asked to vote on the statements related to the scope of the protocol. They were asked to say "yes" to agree with the statement and "no" to disagree. All the participants agreed on five statements but had a disagreement on two statements (Table 8.4). The letter "n" indicates the number of the participants who voted.
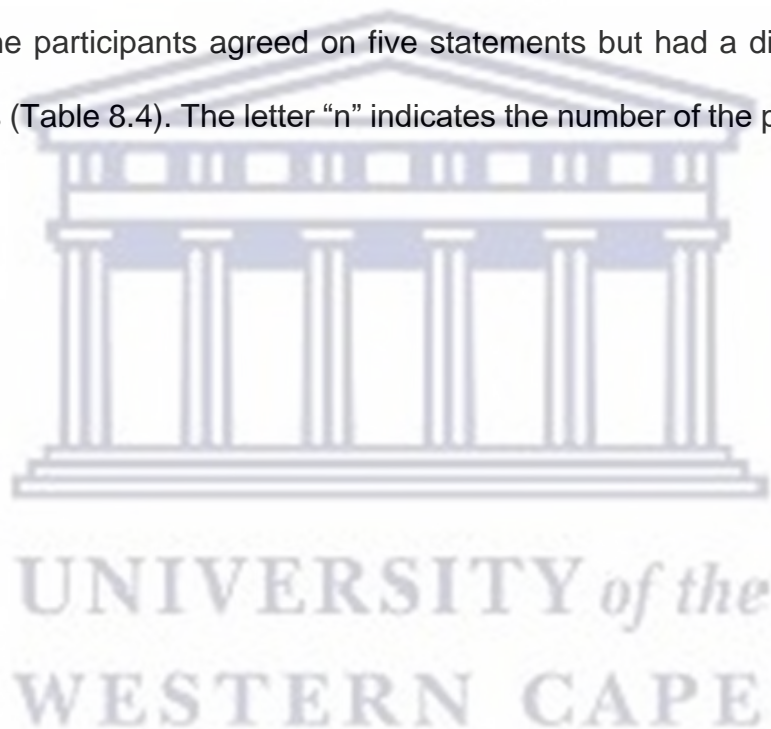
Table 8.4: The scope of the protocol (n = 10)

No	Statements	Agreed n (%)	Disagreed n (%)
1	The protocol is designed to reduce all nursing categories of PHC nurses' stigma towards MHCU	10 (100.0)	0 (0.0)
2	The protocol is based on evidences from empirical studies and systematic review	10 (100.0)	0 (0.0)
3	It is relevant to the South African context and will be regularly revised when there is a need	10 (100.0)	0 (0.0)
4	It is not designed for nurses employed in private hospitals, public district and tertiary hospitals	10 (100.0)	0 (0.0)
5	It targets the improvement of PHC nurses' mental health knowledge, changes in negative beliefs and attitudes towards MHCU	10 (100.0)	0 (0.0)
6	It provides the scope of mental health training limited to a basic introduction to the mental disorders and management, rights of MHCU and mental health stigma	8 (80.0)	2 (20.0)
7	It is not intended for other members of multidisciplinary health team, allied health professionals or administrative staff	7 (70.0)	3 (30.0)

The strategies of the protocol

The participants initially agreed on nine strategies of the protocol in the first NGT.

However, the participants made changes on these strategies in the second NGT. All

the participants voted and agreed on ten statements related to the following

strategies of the protocol namely:

1) To reduce mental health stigma, PHC nurses should be aware of language and action attached to mental health stigma.

2) Incident reports on mental health stigma are to be introduced in the health care system.

3) A checklist will be used to monitor mental health training and exposure.

4) The community members attending services at primary health care level will be aware that the existing boxes for complaints, compliments and suggestions can be used for mental health as well.

5) The managers of PHC facilities should ensure that MHCU get treatment without discrimination.

6) MHCU should be treated in any of consultation offices used by professional nurses. The culture of inclusiveness and openness should take place at PHC facilities by promoting integration of mental health services into all consultation rooms.

7) PHC nurses will have a compulsory mental health training towards stigma reduction.

8) In conjunction with the support of a mental health nurse designated to the PHC facility or a psychiatrist, the manager of the PHC facility should set Standard Operating Procedure (SOP) related to mental health training and stigma

reduction. The manager of the PHC facility remains accountable for signing the SOP.

9) The individual performance and development plan (IPDP) will be emphasized and the active participation of each nurse will be required.

10) The manager of the PHC facility should ensure that mental health day becomes as important as World AIDS Day, World Hand Hygiene Day, and World TB Day.

Mental health training topics

The voting and ranking focused on the mental health training topics. The ranking was based on the priority of the topics to be taught in mental health training. All the participants agreed on thirteen topics; however, the fourteenth statement namely "appropriate referral pathways" was only voted for by eight out of the ten participants (Table 8.5). The letter "n" indicates the number of the participants who voted on the statement. The topics were ranked in order from 1 to 14, with topic number "1" in the column of ranking order being the first to be taught while the topic number "14" will be the last. Table 8.5 presents the mental health training package seen as the checklist for PHC nurses' mental health training.

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Table 8.5: Checklist for PHC nurses' mental health training package (n = 10)

Ranking order	Topics	Agreed n (%)
1	Definition of health	10 (100.0)
2	Definition of mental illness	10 (100.0)
3	Management of aggression	10 (100.0)
4	Definition of stigma	10 (100.0)
5	Introduction to mental health stigma	10 (100.0)
6	A basic introduction to mood disorders	10 (100.0)
7	A basic introduction to depression including its definition, signs and symptoms, and management	10 (100.0)
8	A basic introduction to bipolar mood disorder including its definition, signs and symptoms, and management	10 (100.0)
9	A basic introduction to anxiety disorders including the definitions, signs and symptoms, and management	10 (100.0)
10	A basic introduction to psychotic disorders including the definitions, signs and symptoms, and management	10 (100.0)
11	A basic introduction basic introduction to neurocognitive disorders including the definitions, signs and symptoms, and management	10 (100.0)
12	A basic introduction to substance use disorders including the definitions, signs and symptoms, and management	10 (100.0)
13	Introduction to Mental Health Care Act 17 of 2002	10 (100.0)
14	Appropriate referral pathways	8 (80.0)

Mental health training delivery

The participants were asked to vote on the statements related to the mental health training delivery. They agreed by a statement by saying "yes" and disagreed by saying "no". They reached a consensus on seven statements but disagreed on two statements (See table 8.6). Seven (majority) out of ten participants agreed on one mental health training session every two months. The letter "n" indicates the number of the participants who voted on the statement.

Table 8.6: Mental health training delivery (n =10)

No	Statements	Agreed n (%)
1	The mental health trainer will be a mental health nurse (MHN)	10 (100.0)
2	Mental health theoretical learning needs to be integrated into practice	10 (100.0)
3	The mental health training delivery will be either in-service training or a short mental health course	10 (100.0)
4	During mental health training, the exposure of nurses to MHCU is crucial	10 (100.0)
5	The in-service training will take place within the facility at the flexitime and the manager of the PHC facility will ensure that the training does not affect negatively the health care services delivery	10 (100.0)
6	The manager of the PHC facility assisted by MHN will decide on the dates of the training and the duration of each session	10 (100.0)
7	The mental health short course will take place outside the facility and will require more resources. The manager of the PHC facility will ensure that mental health short course does not affect negatively the health care services delivery	10 (100.0)
8	The package of the topics included in the mental health training will be based on nurses' scope of practice	8 (80.0)
9	There will be one mental health training session once every two months	7 (70.0)

This fifth NGT step lasted 30 minutes and the entire second NGT lasted three hours. The researcher closed the second NGT and informed the participants they would be sent the final protocol for approval.

8.3 Conclusion

Two NGT were conducted following five steps, the design and development of the protocol were guided by IR: D & D model (Rothman & Thomas, 1994) while applying the first two phases and adapted phase three (design and development). Six participants were involved in the first NGT, and ten participants were involved in the second NGT protocol development. All the statements in the protocol were voted for by the majority of the participants who supported the need of mental health training to reduce PHC nurses' mental health stigma. The participants voted and ranked fourteen topics that are included in mental health training.

The next chapter presents the protocol for nurses to reduce stigma towards MHCU.
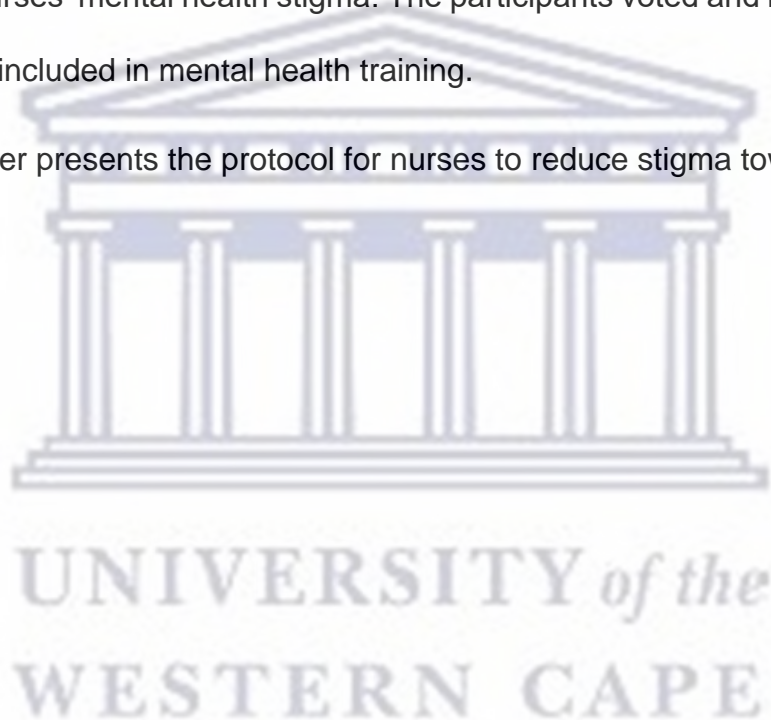
A PROTOCOL FOR PHC NURSES TO REDUCE STIGMA TOWARDS MHCU

(PPHCN TRS MHCU)

9.1 Introduction

The researcher adjusted the statements related to the strategies and mental health training delivery that the participants voted on in the second NGT and the final draft of the protocol was then sent to the participants for approval. The participants approved the final protocol. This chapter presents the final protocol and discussion, and a conclusion.

9.2 Protocol for PHC nurses to reduce stigma towards MHCU

The present protocol is the product of the first and second NGT. It comprises the preface, aim, objectives, rationale, scope, principles, strategies, diagram, implementation strategy, focus, checklist, and expected interventions' outcomes. The final protocol is presented below.

Preface

This protocol serves as a guide for PHC services with a focus on PHC nurses to address stigma towards MHCU seeking health care. It does not address public stigma.

Background

Primary health care emphasises the wider determinants of health and targets comprehensive health services namely physical health, social health, mental health, and wellbeing aspects that interact each other (World Health Organisation, 2021). It prevents and treats diseases, and promotes health at individual level, family level, and community level (World Health Organisation, 2021). It provides care for an individual's

needs as a whole person across the lifespan, does not target specific diseases but it is the most efficient and inclusive approach to promote people's physical and mental health (World Health Organisation, 2021). It needs support from governments at all levels to implement its philosophy of care, overcome the challenges that need interventions beyond the health sector, and ensure integration of people's health in all government policies (World Health Organisation, 2021). Stigma can be viewed as a complex multilevel social process (Thornicroft et al., 2022).

Within South Africa, an integrated and holistic approach of stakeholders and government departments should be involved in addressing mental health issues (Western Cape Department Health, 2021). Those mental health challenges relate to insufficient financial and human resources allocated to mental health care, inclusive of PHC nurses without mental health knowledge and skills, their shortage leading to work overload, and stigma towards MHCU (Middleton, 2020). Although the South African Mental Health Act 17 of 2002 underscores the need for the reduction of mental health stigma (Republic of South Africa, 2002), this phenomenon still occurs.

This protocol, designed for PHC nurses to reduce stigma towards MHCU at PHC services, is seen as a guiding checklist. The findings from the quantitative and qualitative studies (Phase one) conducted on PHC nurses show that they have a lack of the basic knowledge of common mental disorders and hold negative beliefs and attitudes towards MHCU. The findings from the systematic review (Phase two) indicate that the educational intervention, contact intervention, the combination of educational intervention and contact intervention were found to be effective in reducing health care providers' mental health stigma at the global level. All these findings were synthesised towards the development of this protocol.

Aim of the protocol

- To provide guidelines to PHC nurses to reduce stigma towards MHCU

Objectives of the protocol

1) To guide PHC nurses on the needs of mental health training towards mental health stigma reduction.

2) To advocate for the representation of MHCU in the relevant levels associated with mental health services delivery towards their participation in decision-making, equal treatment and stigma reduction.

3) To recommend the implementation of relevant documents such as mental health stigma reduction protocol, which includes specifications for mental health training and incident reports on mental health stigma.

Rationale of the protocol

1) This protocol will demonstrate the guidelines to reduce PHC nurses' stigma towards MHCU.

2) It serves as guide for the managers of PHC facilities to monitor PHC nurses' mental health training attendance.

3) This protocol will ensure that the voice of MHCU is heard through their representation in the relevant committees towards the improvement of service delivery and mental health stigma reduction.

4) This protocol will make PHC nurses aware of existing mental health stigma and its impact on the lives of MHCU.

The scope of the protocol

1) The protocol is designed to reduce all nursing categories of PHC nurses' stigma towards MHCU.

2) The protocol is based on evidences from empirical studies and systematic review.

3) It is relevant to the South African context and will be regularly revised when there is a need.

4) It is not designed for nurses employed in private and public hospitals.

5) It is aimed at the improvement of PHC nurses' mental health knowledge, changes in negative beliefs and attitudes towards MHCU.

6) It provides the scope of mental health training limited to a basic introduction to the mental disorders and management, rights of MHCU and mental health stigma.

7) It is not intended for other members of multidisciplinary health team, allied health professionals or administrative staff.

Principles underpinning the protocol

1) This protocol should be seen as a guide checklist to reduce mental health stigma.

2) The protocol is designed based on evidence from the empirical studies and systematic review and it is relevant to the South African context.

3) This protocol addresses mental health stigma reduction, and it is applicable to PHC nurses. It will be revised on a regular basis based on the PHC facilities' needs.

4) This protocol recommends the voice of MHCU through their representation in the committees dealing with mental health services at all the levels.

5) This protocol recommends that all PHC nurses should have basic knowledge about mental health and related stigma and have exposure to MHCU. During mental health training, exposure of nurses to MHCU is crucial.

Strategies of the protocol

1) To reduce mental health stigma, PHC nurses should be aware of language and action attached to mental health stigma.

2) Incident reports on mental health stigma are to be introduced in the health care system.

3) A checklist will be used to monitor mental health training and exposure.

4) The community members attending services at PHC level will be aware that the existing boxes for complaints, compliments and suggestions can be used for mental health as well.

5) The managers of PHC facilities should ensure that MHCU get treatment without discrimination.

6) The MHCU should be treated in any of the consultation offices/rooms used by professional nurses. The culture of inclusiveness and openness should take place at PHC facilities by promoting integration of mental health services into all consultation rooms.

7) PHC nurses will have compulsory mental health training towards stigma reduction.

8) In conjunction with the support of a mental health nurse designated to the PHC facility, the manager of the PHC facility should set a Standard Operating Procedure (SOP) related to mental health training and stigma reduction. The manager of the PHC facility remains accountable for signing the SOP.

9) The individual performance and development plan (IPDP) will be emphasized and the active participation of each nurse will be required.

10) The manager of the PHC facility should ensure that mental health day becomes as important as World AIDS Day, World Hand Hygiene Day, and World TB Day.

Implementation strategy for the protocol

The researcher will submit and present the protocol to the Western Cape Department of Health and recommend it to be included in policy in order for it to be implemented at PHC facilities. The researcher will also present it to clinical health care professionals, and health care managers.

The focus of the protocol

The protocol focuses on mental health knowledge; meaning the basic knowledge of common mental disorders and related stigma, beliefs and attitudes towards MHCU.

Mental health stigma reduction interventions

1) Studies proved that the educational intervention, contact intervention, and the combination of both educational and contact interventions are effective in reducing mental health stigma. However, the current protocol recommends the combination of both educational intervention and contact intervention as the most effective intervention to reduce PHC nurses' mental health stigma.

2) The educational intervention will consist of theory sessions including the topics recommended by the protocol. A mental health nurse who has experience in teaching mental health courses will prepare a lesson on a topic that will be taught according to the schedule. The training facilitator (a mental health nurse) will use the available teaching material.

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3) The contact intervention will consist of direct contact with MHCU. PHC nurses will have a direct contact with MHCU while caring for MHCU at PHC. The indirect contact with MHCU will consist of watching videos on MHCU sharing her/his lived experience of mental disorder and stigma.

4) The combination of both educational intervention and contact intervention will be used in the mental health training. PHC nurses will attend theory sessions and will have an exposure to MHCU by watching video, and then in real life situation by caring for the actual MHCU.

Mental health training delivery

1) The mental health trainer will be a mental health nurse.

2) Mental health theoretical learning needs to be integrated into practice.

3) The mental health training delivery will be either in-service training or a short mental health course.

4) During mental health training, the exposure of nurses to MHCU is crucial.

5) The in-service training will take place within the facility at a convenient time and the manager of the PHC facility will ensure that the training does not negatively affect the health care services delivery.

6) The manager of the PHC facility assisted by a mental health nurse will decide on the dates of the training and the duration of each session.

7) The mental health short course will take place outside the facility and will require more resources. The manager of the PHC facility will ensure that the mental health short course does not negatively affect the health care services delivery.

8) The package of the topics included in the mental health training will be based on nurses' scope of practice.

9) There will be one mental health training session once every two months.

Mental health training package

The mental health training topics are included in the checklist below and this checklist serves a guide (Table 9.1).

Table 9.1: PHC nurses' mental health training package

No	Topics
1	Definition of health
2	Definition of mental illness
3	Management of aggression
4	Definition of stigma
5	Introduction to mental health stigma
6	A basic introduction to depressive disorders including the definition, signs and symptoms, and management
7	A basic introduction to bipolar and related disorders including the definition, signs and symptoms, and management
8	A basic introduction to anxiety disorders including the definitions, signs and symptoms, and management
9	A basic introduction to schizophrenia spectrum and other psychotic disorders including the definitions, signs and symptoms, and management
10	A basic introduction to neurocognitive disorders including the definitions, signs and symptoms, and management
11	A basic introduction to substance-related and addictive disorders including the definitions, signs and symptoms, and management
12	Introduction to Mental Health Care Act 17 of 2002
13	Appropriate referral pathways

Expected outcomes

1) Development of the protocol for PHC nurses to reduce stigma towards MHCU.

2) Increase in basic mental health knowledge among PHC nurses.

3) A positive change in PHC nurses' negative beliefs about MHCU.

4) A positive change in PHC nurses' negative attitudes towards MHCU.

5) Representation of MHCU in the committees associated with mental health care services.

Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) explain that mental health stigma results from a lack of mental health knowledge. By applying Weiner's attributional theory (1985) that explains how the internal and external attributions are based on their level of mental health knowledge, nurses can have either internal attribution or external attribution to MHCU. The internal attribution purports that MHCU are the causes of their mental disorders, meaning that they are responsible for their mental disorders. This is a negative belief due the lack of knowledge and leads to stigma. However, the external attribution suggests that MHCU are not responsible for their mental disorders.

According to Corrigan's cognitive stigma model (2000), the behaviour of MHCU triggers nurses' negative beliefs about them leading to negative attitudes. Negative beliefs and attitudes towards MHCU are due to a lack of mental health knowledge. To reduce stigma, both Weiner's attributional theory (1985) and Corrigan's cognitive stigma model (2000) emphasize the acquisition of knowledge.

Nurses' negative beliefs and attitudes that form mental health stigma are influenced by internal and external factors. The current study developed the protocol for PHC nurses to reduce stigma towards MHCU. This protocol will contribute to the improvement in PHC nurses' mental health knowledge, a positive change in their negative beliefs and attitudes towards MHCU, thus reducing mental health stigma. Figure 9.1 below depicts the protocol for PHC nurses to reduce mental health reduction.
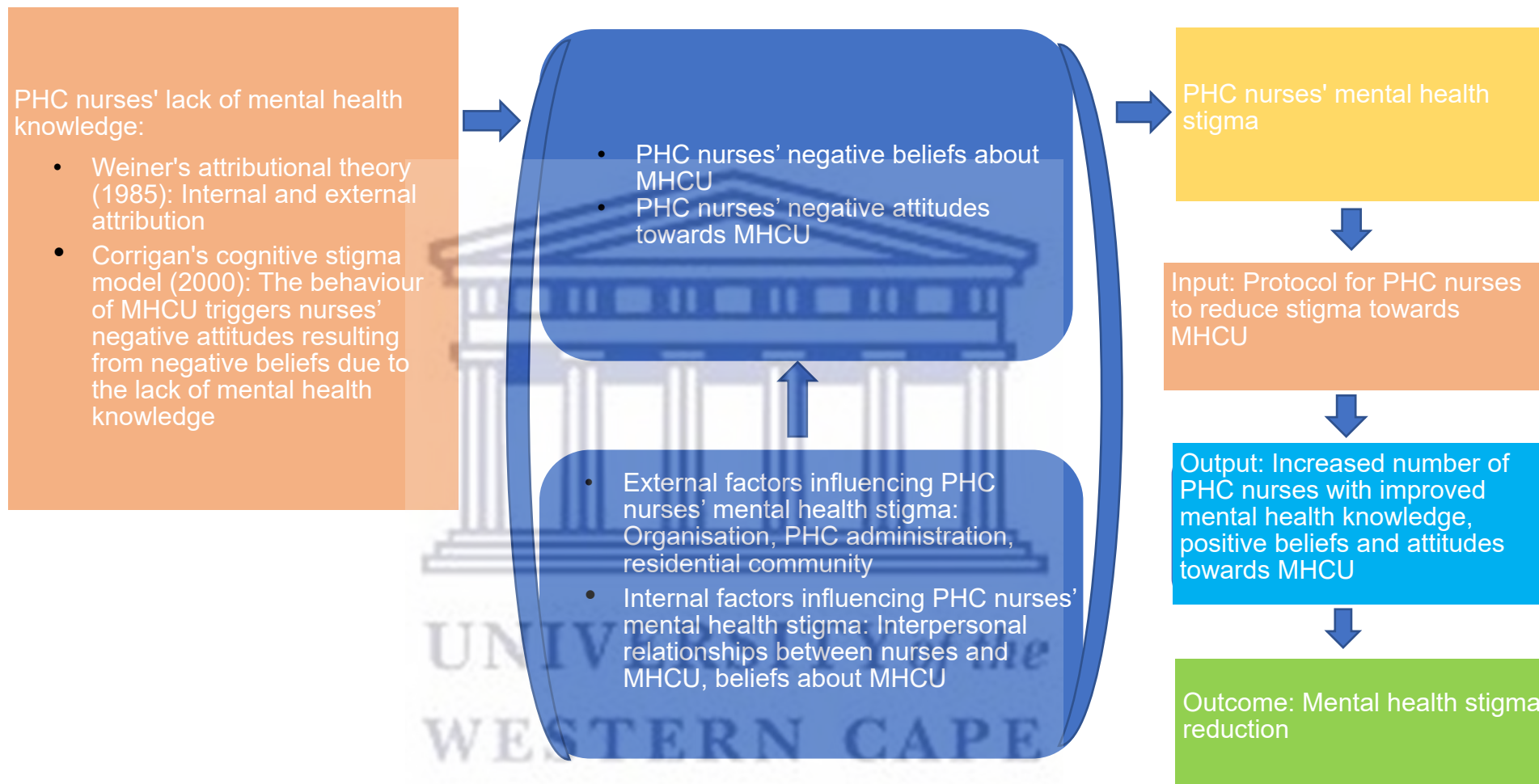
Figure 9.1: Protocol for PHC nurses to reduce stigma towards MHCU (PPHCN TRS MHCU)

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9.3 Protocol: Discussion

This section includes the introduction, mental health training and conclusion.

9.3.1 Introduction

Studies have proved the effectiveness of the existing interventions used to reduce mental health stigma (Harris et al., 2019; Stuhlmiller & Tolchard, 2019). The NGT participants approved the mental health training package. The developed protocol serves as a guide for PHC facilities in mental health stigma reduction.

9.3.2 Interventions

Studies have showed that the combination of educational and contact interventions is effective to reduce health care providers' stigma towards MHCU (McCormack, Gilbert, Ott & Plake, 2018; Rössler, 2016; Harris et al., 2019; Stuhlmiller & Tolchard, 2019). Similarly, a study conducted by Morgan et al. (2018) proved the effectiveness of both interventions. Consistent with the above studies, the NGT participants used in the current study recommended the educational intervention and the exposure of PHC nurses to MHCU. This combination is aligned with the integration of theory into the practice. The contact of PHC nurses with MHCU can improve mental health knowledge yielding a positive change in nurses' negative attitudes. Supporting this statement, a study carried out in Australia indicated that the exposure of nursing students to MHCU increased their willingness to care for them (Foster et al., 2019). Similarly, a study conducted in South Africa by Eksteen, Becker and Lippi (2017) found that medical students' experience in caring for MHCU leads to a positive change in their negative attitudes towards MHCU.

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9.3.3 Mental health training package

The mental health training topics were ranked in order of priority. The protocol developed recommends that the mental health training will consist of a basic introduction to the common mental disorders in South Africa. Similarly, a mental health programme developed for the community health workers in the Western Cape province of South Africa included management of aggression, Mental Health Care Act 17 of 2002, common mental disorders, and intellectual disability (Sibeko, 2016; Sibeko, 2018). The common mental disorders were also included in mental health stigma training within South Africa (Slaven et al., 2021).

Understanding of mental disorders might be influenced by the external factors such as the cultural beliefs. For instance, the individuals might associate drug abuse with schizophrenia and other psychotic disorders resulting in mental health stigma (Masinga, Nyamaruze & Akintola, 2022). The findings of the current study showed that negative beliefs about MHCU result from a lack of mental health knowledge. It is essential for PHC nurses to have a basic knowledge of common disorders in South Africa. This includes mood disorders, anxiety disorders, psychotic disorders, neurocognitive disorders and substance use disorders (Mogambery, Dawood, Wilson & Moodle, 2017; Temmingh et al., 2020; Van Wyk, Martin & Meintjes, 2021; Masinga et al., 2022). The application of this protocol will allow PHC nurses to acquire the knowledge on introduction to the Mental Health Care Act 17 of 2002 so that they learn that MHCU have a right to treatment like the patients with medical conditions (Robertson, Moosa & Jeenah, 2021).

Nurses' fear of MHCU and social distance from them have been reported (Johanna et al., 2022; Peart, Kerr & Searby, 2023; Derblom, Molin, Gabrielsson & Lindgren, 2022). Therefore, PHC nurses will learn the management of MHCU including the strategies

for management of aggression, hence in this way their fear can be alleviated (Adeniyi & Puzi, 2021; Ramezani, Gholamzadeh, Torabizadeh, Sharif & Ahmadzadeh, 2017). PHC nurses will attend an in-service training organised at the PHC level and the Department of Health (DOH) should be responsible for the training. With regard to the mental health training short course, it requires human and financial resources as this course is offered by an education institution. Therefore, the short course might not be convenient to the training of the all PHC nurses. The World Health Organisation (2020) indicated that MHCU experience stigma and struggle to access mental health care. Since mental health care services have been integrated into PHC level, PHC nurses are expected to serve MHCU without discrimination.

9.3.4 Validation of the protocol

The validation of the protocol consists of an assessment carried out by experts to ensure its appropriateness, feasibility, acceptability and usefulness (Catunda, Bernardo, Vasconcellos, Moura, Pinheiro & Aquino, 2017; Vieira, Sakamoto, Moraes, Blatt & Caregnato, 2020). The protocol can be valuable if the evidence for its appropriateness is assessed by experts in the area of the protocol and it includes the specific needs of the people for which it is developed (Catunda et al., 2017; Sousa, Chagas, Vasconcelos, Stein & Oriá, 2018; Vieira et al., 2020). The protocol validation by experts should reflect the expectations of the health professionals who will use this protocol (Catunda et al., 2017). In this study, a purposive sample of managers of the PHC facilities and mental health nurses employed at these facilities was included in the NGT. They participated in the protocol development to ensure that the protocol was in line with PHC nurses' mental health training needs. Furthermore, the developed protocol (PPHCN TRS MHCU) was validated by three experts in mental health.

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The first expert had experience in mental health research, teaching mental health in academic institution and was a member of mental health board. This expert suggested that the researcher should not instruct the PHC nurses, managers and the DoH what do with the protocol. This expert suggested the terms and statements to be used to ensure the clarity of the protocol for the future users. The researcher made changes accordingly and had an online meeting with this expert for agreement. The first expert confirmed that the protocol followed the correct development process and was useful (See appendix 21).

The second expert had experience in mental health research and teaching in academic institutions. This expert recommended the consistent use of PHC nurses throughout the thesis because they are the focus of this study. The researcher acknowledged the recommendation and made necessary adjustments. Furthermore, the second expert raised a query about the inclusion of district psychiatrists in the NGT while they were not included in the objectives. The researcher explained that the use of district psychiatrists in this study was justified in research methodology. The second expert was concerned about a smilar list of strategies that was repeated two times in Chapter eight and stated that this repetition could confuse the readers. the researcher explained to the expert that the repetition was due to the protocol development process by using two NGT in Chapter eight. To exclude the possible confusion of the readers, the researcher added a statement on the second list of strategies explaining the reasons for the repetition. The researcher and the second expert had an online meeting during which the researcher explained how he addressed the comments. The second expert confirmed that the protocol was well developed and appropriate to be used (See appendix 22).

The third expert had experience in mental health research and teaching in academic institutions. This expert approved the protocol and suggested the researcher to use the terminology of mental disorders recommended by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). This expert confirmed that the protocol was well developed and appropriate to be used. This expert said: "It was very interesting reading through the work, the approach followed made perfect sense and the triangulation of data is especially well portrayed" (See appendix 23). The researcher made changes based on the third expert's suggestions and the terminology of mental disorders recommended by the DSM-V were used in mental health training package.

9.3.5 Conclusion

The current protocol is designed for PHC nurses to reduce stigma towards MHCU, and is relevant to the South African context. This protocol will be a guide and should be reviewed based on each facility's needs. The managers of PHC facilities should take ownership of this protocol whilst a mental health nurse appointed at a specific PHC facility should facilitate the training in consultation with the relevant facility manager. The mental health training delivery could be in-service training as it is feasible at no additional costs, while a mental health short course requires financial resources and study leave for PHC nurses.

The next chapter presents evaluation, contributions of the study, limitations, recommendations, and conclusion.

CHAPTER TEN

EVALUATION, CONTRIBUTIONS OF THE STUDY, LIMITATIONS, RECOMMENDATIONS, AND CONCLUSION

10.1 Introduction

This study comprises ten chapters: Chapter one presents the introduction and background of the study while Chapter two presents the literature review. Chapter three discusses the research methodology. Chapters four, five, and six discuss the findings from the quantitative and qualitative studies, and from the systematic review. The data collected from the three studies were triangulated in Chapter seven. The key findings from the three studies were used to design and develop the protocol in Chapter eight and Chapter nine. The previous chapter presents the developed protocol for PHC nurses to reduce mental health stigma, it discusses the implementation of strategy, and the validation of the protocol in respect to the structure, content, relevance, feasibility and appropriateness. This chapter presents the evaluation, contributions of the study, study limitations, recommendations and conclusion.

10.2 Evaluation

The aim of this study was to develop a protocol for PHC nurses to reduce stigma towards mental health care users at PHC services in the Western Cape by assessing their knowledge, beliefs and attitudes towards mental health care users at primary health care services and synthesising the existing interventions. The researcher of this study believes that the integration of many research approaches allows him to get a greater understanding of the research problem and achieve the study objectives (Creswell, 2014b). This researcher believes in the pragmatic worldview and applied a

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multi-method research approach. In this regard, quantitative and qualitative studies (Phase one), systematic review (Phase two) were conducted.

The attributional theory of Weiner (1985) and Corrigan's cognitive stigma model (2000) framed the current study to determine PHC nurses' mental health knowledge, beliefs and attitudes, explore mental health stigma and its reduction interventions. The researcher synthesised the data collected from the quantitative and qualitative studies, and from the systematic review, and the findings showed the similarities of the data. In general, quantitative data and qualitative data complemented each other. However, more data related to attitudes were collected from the qualitative study.

The quantitative study (Step one of Phase one) had three objectives. To reach these objectives, a quantitative descriptive study using a self-report questionnaire was employed to collect data from PHC nurses' basic knowledge of common disorders, their beliefs and attitudes towards people with mental disorders. Data were analysed and key findings were identified, the researcher made the concluding statements.

1. Objective one: to determine PHC nurses' level of knowledge about mental disorders. Objective one was met, the findings showed that PHC nurses lacked mental health knowledge, related to the definitions, signs and symptoms of common mental disorders in South Africa. The findings also showed that PHC registered nurses (RNs) had higher mental health knowledge scores than enrolled nurses (ENs) and enrolled nursing assistants (ENAs), indicating a positive influence of higher level of education on mental health knowledge. In general, PHC nurses were not knowledgeable about the common mental disorders. Nurses' lack of mental health knowledge was reported in other studies.

2. Objective two: to assess PHC nurses' beliefs about mental disorders and people with mental disorders. This objective was reached, the findings showed that PHC

nurses held negative beliefs about people with mental disorders who are seen as unpredictable, dangerous and aggressive. The findings also showed that PHC RNs had lower negative beliefs scores than ENs and ENAs, showing a positive influence of a higher level of education on beliefs about people with mental disorders. The abovementioned negative beliefs among PHC nurses are a concern as they result in fear of people with mental disorders and hinder good quality care. These beliefs are supported by other studies.

3. Objective three: to determine PHC nurses' attitudes towards mental disorders and people with mental disorders. This objective was achieved, the findings revealed that PHC nurses held negative attitudes towards people with mental disorders. The main negative attitudes found in this study were PHC nurses' frustration and fear caused by caring for people with mental disorders, and PHC nurses' social distance from them. These negative attitudes are supported by other studies and prevent people with mental disorders from receiving adequate mental health care.

The qualitative study (Step two of Phase one) had one objective: Objective four. To reach this objective, an exploratory descriptive qualitative design using a semi-structured interview guide was employed to gather information from PHC nurses and nurses employed in 72-hour assessment psychiatric units. The researcher and the independent coder analysed the data, and the key findings were listed. The researcher identified the key findings and concluding statements were made.

4. Objective four: to explore mental health stigma and its reduction intervention among nurses working at primary health care facilities. This objective was met, the findings indicated that PHC non-mental health nurses lacked mental health knowledge causing mental health stigma. Moreover, the findings reported PHC non-mental health nurses' negative beliefs about people with mental disorders being seen as unpredictable,

dangerous and aggressive. This qualitative study reported negative attitudes among PHC non-mental health nurses. The findings showed that PHC non-mental health nurses had feelings of frustration and fear caused by caring for people with mental disorders from whom they distanced themselves. In addition, it was found that PHC non-mental health nurses were not interested in caring for people with mental disorders and that they discriminated against them. Moreover, the findings revealed that PHC non-mental health nurses labelled people with mental disorders with derogatory names and sent them back home without treatment when a mental health care nurse was not available. This study suggested the need for mental health training for PHC nurses to reduce stigma.

The systematic review (Phase two) was conducted and had one objective; Objective five, and a review question namely:

- What are the interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment?

The researcher applied five steps while conducting a systematic review (Khan et al., 2011). This study focused on primary studies that used randomised controlled trials, or quasi-experimental ones, one cohort (one group pre- and post-intervention) and cohort analytic (two groups pre- and post-intervention) designs. PICO provided a guide to examine the characteristics of studies for inclusion in this study (Joanna Briggs Institute, 2014). The eligible studies were critically appraised by the researcher and the supervisor of this study. The key findings were identified and concluding statements were made.

5. Objective five: to identify and review existing effective interventions used for health care providers to reduce stigma towards people with mental disorders in a caring environment. This objective was achieved and the review question was answered. The findings showed that the educational intervention, contact intervention, and the

combination of both interventions were effective in improving health care providers' mental health knowledge and reducing their negative beliefs and attitudes towards people with mental disorders. However, while these interventions were effective in the short-term (after the intervention), other studies that investigated the effectiveness of these interventions in the long-term could not be found. Moreover, studies that investigated the protest intervention were scarce and there was no study which was eligible for inclusion.

The key findings for each study were identified and the triangulation followed. The researcher identified and merged the similarities of the findings from the three studies, and the different findings were accepted as they were complementary to the similarities.

The similarities among quantitative and qualitative studies were related to mental health knowledge, negative beliefs and beliefs, and mental health training to reduce mental health stigma.

- The quantitative and qualitative studies found that PHC nurses lacked mental health knowledge
- Both studies found that PHC nurses held negative beliefs about the unpredictability, dangerousness and aggression of people with mental disorders
- Both studies found that PHC nurses held negative attitudes such as frustration, fear and social distance

The similarities among the qualitative study and the systematic review related to mental health training to reduce mental health stigma.

- The qualitative study's findings showed that there was a need for educational intervention which was also found in the systematic review

Differences of the findings among the quantitative and qualitative studies:

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- The qualitative study reported PHC non-mental health nurses' lack of interest in caring for people with mental disorders

- The qualitative study reported that PHC non-mental health nurses discriminate against people with mental disorders

- The qualitative study reported that PHC non-mental health nurses sent against people with mental disorders home without treatment

Differences of the findings from the systematic review:

- Contact intervention to reduce mental health stigma

- Combination of both educational and contact interventions to reduce mental health stigma

The triangulated and synthesised findings from the quantitative and qualitative studies, and the systematic review were used to design and develop the protocol.

The NGT (Phase three) was conducted and had one objective: Objective six. The researcher adapted the third step and fourth step (design and development) of IR-D&D (Rothman &Thomas, 1994) that framed the design and development of the protocol.

6. Objective six: to develop an intervention protocol for PHC nurses to reduce mental health stigma at primary health care services. Two NGT were conducted using ten experts who found the synthesised findings useful for the protocol development. The experts reached a consensus on the items included in the protocol that was finalised by the researcher. The protocol was validated by three experts in mental health. The experts read Chapters eight and nine, and approved the design and development process of the protocol. With regard to the topics included in mental health training, the experts recommended that the researcher should use terminology related to mental disorders as recommended by the DSM-V. The researcher accepted the

comments, and the changes were made. Objective six was met and the PPHCN TRS MHCU protocol was developed and validated.

10.3 Contributions of the study

10.3.1 Contribution to understanding of mental health stigma

Lack of mental health knowledge, seen as the main cause of mental health stigma, has been reported among nurses at global level (Ubaka et al., 2018; Derblom et al., 2021) and in South Africa (Monnapula-Mazabane & Petersen, 2021). At global level, mental health stigma consists of negative beliefs and attitudes towards mental disorders and people with mental disorders (Tambag, 2018; Murat et al., 2021). The study has contributed to the understanding of mental health stigma in the Western Cape province and in South Africa. It highlights PHC nurses' lack of mental health knowledge, their negative beliefs and attitudes towards people with mental disorders. This study indicated that mental health stigma occurs when people believe that people with mental disorders are unpredictable, dangerous and aggressive. Moreover, this study showed that mental health stigma consists of negative attitudes.

10.3.2 Contribution to nursing education and practice

This study found that PHC nurses held negative beliefs and attitudes towards people with mental disorders due to their lack of mental health knowledge. The findings revealed that mental health training contributed to lower levels of negative beliefs and attitudes towards people with mental disorders. For instance, in comparing RNs and other nursing categories (ENs and ENAs), this study found that RNs had higher levels of mental health knowledge than ENs and ENAs, also had less negative beliefs and attitudes towards people with mental disorders than ENs and ENAs. The overall mental health knowledge scores among PHC nurses indicated that they lacked knowledge of the definitions and signs and symptoms of common mental disorders in

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South Africa. This is evidence of the deficiencies in mental health training within nursing education institutions in the Western Cape.

10.3.3 Contribution of the development the protocol

The findings from the quantitative and qualitative studies indicated that PHC nurses held mental health stigma preventing people with mental disorders from seeking professional help. PHC nurses' learning needs were identified based on the synthesised findings from both quantitative and qualitative findings, and the PPHCN TRS MHCU protocol was developed. This is a unique protocol that serves as a guide for PHC nurses to reduce mental health stigma in the South African context. This study recommended the PPHCN TRS MHCU protocol be implemented in PHC facilities and it should be revised based on their specific needs. To the best of the researcher's knowledge, this is the first protocol developed for PHC nurses in relation to mental health stigma reduction in South Africa.

10.4 Recommendations

The recommendations are addressed to nursing education, nursing practice, the Department of Health, and the future researchers.

10.4.1 Recommendation for nursing education

The findings showed that the respondents scored an average of 15.6/20 (78.0%), meaning that PHC nurses were not knowledgeable of the definitions, signs and symptoms of common mental disorders in South Africa. This study recommends that nursing education institutions improve learning and teaching of common mental disorders in nursing curricula. This will allow PHC nurses to acquire knowledge and skills that can be used in primary, secondary and tertiary prevention of these disorders.

The findings indicated that nearly half (115, 49.1%) of 234 PHC nurse respondents agreed, or were uncertain, that people with mental disorders are aggressive. As a result, 112 (47.9) of the PHC nurse respondents were either in agreement with or were uncertain of fear of people with mental disorders. This study recommends that nursing education institutions improve learning and teaching related to the practical of management of aggression, so that PHC nurses' fear can be reduced and their desire to care for people with mental disorders increased.

The findings showed that mental health stigma causes people with mental disorders to default on treatment. PHC nurses should be aware of mental health stigma and its consequences. It is recommended that nursing education institutions emphisise learning and teaching about mental health stigma in psychiatric nursing modules.

10.4.2 Recommendation for nursing practice

The findings showed that PHC nurses assign people with mental disorders to a mental health care nurse and send them home without treatment when a mental health care nurse is not available. This study recommends that managers of PHC facilities improve the integration of mental health care services into primary care by taking ownership of nurses' in-service mental health training at PHC facilities. Moreover, it is recommended that managers of PHC facilities support and monitor the implementation of the PPHCN TRS MHCU protocol.

10.4.3 Recommendation for the Department of Health

The PPHCN TRS MHCU protocol was developed to be used in PHC facilities that need support from the provincial policy makers/politicians. The implementation and sustainability of this protocol require the involvement of the Department of Health (DoH). The DoH should facilitate and support the implementation of the PPHCN TRS MHCU protocol, and ensure its sustainability.

10.4.4 Recommendation for nursing research

PHC nurses are the first point of contact with the patients in the health care system but they work within a multidisciplinary team. The findings of this study revealed that other members of multidisciplinary team also discriminate against people with mental disorders who seek care at PHC facilities. Furthermore, this study revealed mental health stigma among policy makers/politicians. Given that external factors (organisational factors, PHC administrative factors, and residential community factors) influence PHC nurses' mental health stigma, it is recommended that future researchers develop interventions to reduce mental health care stigma at these levels as well.

10.5 Study limitations

Study limitations, which can influence the study's findings and conclusions, are common in research regardless of the type of designs (Ross & Bibler Zaidi, 2019). It is crucial for a researcher to present the alternative approaches used to counteract the study's limitations or discuss the possible implications of the limitations (Ross & Bibler Zaidi, 2019).

In this study, the items included in the self-report questionnaire were limited to the basic knowledge of the definitions, signs and symptoms of the common mental disorders in South Africa. The knowledge and skills related to nursing and pharmacological management of common mental disorders were not assessed.

With regard to PHC nurses' attitudes towards people with mental disorders, the use of the self-report questionnaire with closed-ended questions could facilitate potential biases associated with a reluctance to disclose their genuine attitudes. The fear of disclosing attitudes associated with discrimination against people with mental disorders might be to avoid disciplinary procedures resulting from their violation of the

Mental Health Care Act 17 of 2002. This might also be due to the desire to protect the reputation of their respective PHC facilities. To minimise these biases, the open-ended questions asked in the individual interviews allowed the researcher to explore the answers to the attitudes associated with discrimination against people with mental disorders. In this regard, the information obtained from the qualitative study participants complemented the information gained from the quantitative study participants.

Because of resource constraints, this study was limited to PHC nurses permanently employed at CHC and CDC, and 72-hour assessment units in the Cape Town Metropole. Therefore, the findings of this study cannot be generalised to other PHC facilities and 72-hour assessment units across South Africa. People with mental disorders attending PHC services for follow-ups could have been interviewed so as to ascertain PHC nurses' attitudes towards them and fill any gaps in information collected from PHC nurses and support the information from the systematic review. People with mental disorders could not be included due to time constraints, a limited budget and tight deadlines for the completion of this doctoral study.

10.6 Conclusion

The aim and objectives of this study have been met: the findings from both quantitative and qualitative studies revealed PHC nurses' lack of mental health knowledge, negative beliefs and attitudes towards people with mental disorders. The systematic review findings showed that the educational intervention, contact intervention and the combination of both interventions increased mental health knowledge, reduced health care providers' negative beliefs and attitudes towards people with mental disorders in the short-term (after the intervention). The key findings from each study were identified and further triangulated for the use in the design and development of the protocol using

two NGT. There was a need to develop the PPHCN TRS MHCU protocol which was validated by three experts and found useful as a guide for PHC nurses to reduce their stigma towards MHCU.

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APPENDICES

Appendix 1: Self-report questionnaire

Title: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

SECTION A: DEMOGRAPHIC INFORMATION

A1. Gender

Please tick in one box below according to your gender.

1	Male	
2	Female	

A2. Age

Please write your approximate age expressed in years in the box below.

A3. Marital status

Please tick in one box below reflecting your marital status.

1	Single	
2	Married	
3	Divorced	
4	Widow	
5	Partner	

A4. Level of education

Please tick in one box below according to your highest level of education.

1	Certificate	
2	A four-year Diploma	
3	A four-year Bachelor degree	
4	A Master's degree	
5	Other specify:	

A5. Nursing rank

Please tick in one box below according to your scope of practice.

1	Enrolled nursing assistant	
2	Enrolled nurse	
3	Registered nurse	
4	Other specify:	

A6. Work experience

A6.1. How long have you been working at primary health care facility?

………………years…………months

A6.2. Have you attended to any patient with mental disorder at primary health care facility in the last year?
Please tick in one box below.

1	Yes	
2	No	

A6.3. Have you provided any care to a patient with a mental disorder at primary health care facility over the last year?
Please tick in one box below.

1	Yes	
2	No	

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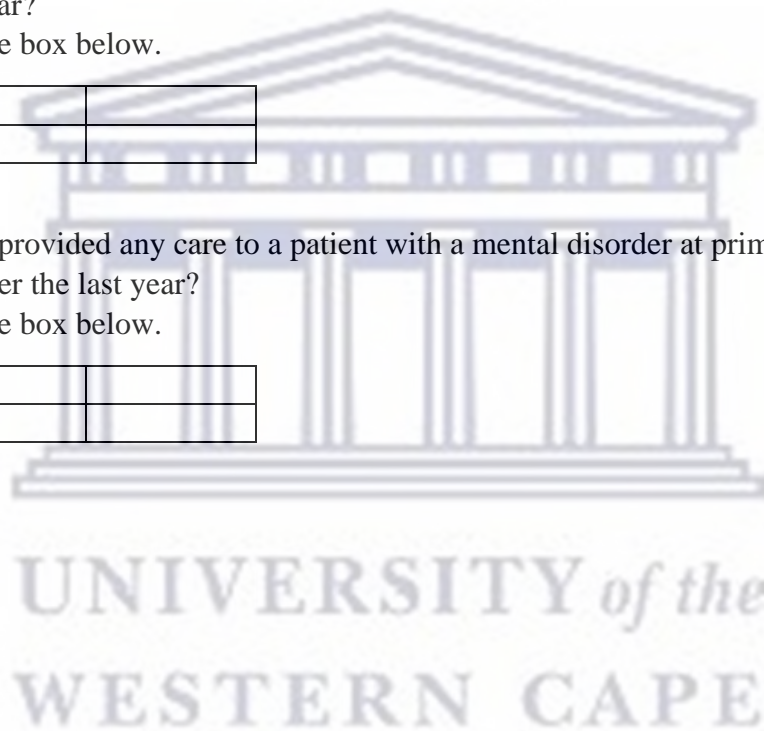
SECTION B: MENTAL HEALTH KNOWLEDGE

Please indicate your knowledge about mental disorders and people with mental disorders by ticking an appropriate box below.

No	Items	Disagree	Uncertain	Agree
B1	A person with psychosis' mental capacity to recognize the reality, to remember, think, communicate with others, respond emotionally, and behave appropriately is diminished			
B2	A person with an **anxiety disorder** has feelings of uncertainty, discomfort, worry about the future, or tension that she/he experiences in response to an unknown object or situation			
B3	A person with **generalised anxiety disorder** experiences and has difficulty to control persistent and excessive anxiety and worry about a number of events or activities such as work or social performance			
B4	A person with a **phobia** experiences an excessive, unreasonable and persistent fear triggered by a specific object or situation			
B5	A person with **agoraphobia** experiences an abnormal fear of being in crowds, public places, or open areas			
B6	A person with **a social anxiety disorder** experiences an intense fear or anxiety about situations in which she/he may be under scrutiny of others, she/he fears negative evaluation by others			
B7	A person with **eating disorder** suffers from a mental disorder associated with severe disturbances in her/his eating behaviour			

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No	Items	Disagree	Uncertain	Agree
B8	A person with **personality disorder** suffers from a mental disorder which makes her/him think, feel, behave or relate to others very differently from the average person			
B9	A person with **depression** suffers from a mental disorder in which she/he feels very sad, withdraws from the society			
B10	A person with **depression** experiences the symptoms such as loss of energy, feeling of worthlessness, sleeping trouble, poor concentration, feeling of hopelessness and difficulty making decisions			
B11	**Cognitive Behaviour Therapy** is designed to treat a wide range of mental disorders including **depression** and is a therapy based on challenging negative thoughts and increasing helpful behaviours			
B12	**Deliberate self-harm** reported among the persons with mental disorders including **depression** is perceived as the behaviour that a person uses to cope with difficult or painful feelings			
B13	**Dysthymia** is a mental disorder known as **persistent depressive disorder**			
B14	A person with **bipolar disorder** suffers from a mental disorder in which she/he experiences the periods of elevated (i.e., high) and periods of depressed (i.e., low) mood			
B15	A person with **schizophrenia** suffers from a mental disorder in which she/he experiences a different reality from that of the people around them			
B16	A person with **substance intoxication** suffers from a substance-induced disorder in which she/he experiences psychological alterations of consciousness due to recent substance consumption			

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No	Items	Disagree	Uncertain	Agree
B17	A person suffers from **drug dependence** which is a substance use disorder in which she/he may experience withdrawal symptoms if the substance is withheld			
B18	A person with **dementia** suffers from a mental disorder in which progressive degeneration of the brain affects the memory, thinking, behaviour and emotion			
B19	A person with **Alzheimer's disease** can remember an event that happened long and the hallmark of this disease is the inability to form new memories			
B20	A person with **delirium** suffers from an acute, reversible, temporary disorder in which he/he may experience reduced awareness of or contact with the surroundings			

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SECTION C: BELIEFS ABOUT MENTAL DISORDERS AND PEOPLE WITH MENTAL DISORDERS

Please indicate your beliefs about mental health care users by ticking an appropriate box below.

No	Items	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
C1	One of the main causes of mental disorder is a lack of self-discipline and will power					
C2	People with mental disorders don't deserve our sympathy					
C3	People with mental disorders are a burden on society					
C4	People with mental disorders should not be given any responsibility					
C5	People with mental disorders should be isolated from the rest of the community					
C6	People with mental disorders should not be denied their individual rights					
C7	People with mental disorders are far less of a danger than most people suppose					
C8	People with mental disorders are aggressive					
C9	People with mental disorders are violent					
C10	People with mental disorders are unpredictable					
C11	People with mental disorders are responsible for their mental health disorders					
C12	People with mental disorders must be kept behind locked doors					
C13	People with mental disorders are incompetent					

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No	Items	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
C14	People with mental disorders are child-like					
C15	People with mental disorders are untrustworthy					
C16	One of the characteristics of people with mental disorders is a strange behaviour					
C17	People with mental disorders are a burden for caring					
C18	People with mental disorders should be always treated in psychiatric units					
C19	People with mental disorders should be treated as outcasts of society					
C20	People with mental disorders don't have the same rights as the patients with medical conditions					

SECTION D: ATTITUDES TOWARDS PEOPLE WITH MENTAL DISORDERS

Nurses are the frontline health care providers at the primary health care services and care for the patients with different conditions including the **patients with mental disorders**. Attitudes towards people with mental disorders are listed below. Please indicate your agreement regarding the attitudes among nursing staff towards **people with mental disorders** by ticking an appropriate box below.

No	Items	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
D1	Fear of caring for people with mental disorders					
D2	Frustration that results from caring for people with mental disorders					
D3	Anger caused by caring for people with mental disorders					
D4	Reluctance to care for people with mental disorders					
D5	Social distance from people with mental disorders					
D6	Avoidance of people with mental disorders					
D7	Refusal to care for people with mental disorders					
D8	Ignorance of complaints raised by people with mental disorders					
D9	Shouting at the people with mental disorders					
D10	Swearing at the people with mental disorders					
D11	Pushing people with mental disorders					
D12	Beating people with mental disorders					
D13	Chasing people with mental disorders from primary health care facility					
D14	Naming and labelling people with mental disorders (calling them crazy, mad, and so on)					

THANK YOU VERY MUCH

Appendix 2: Semi-structured interview guide

Title: Development of a protocol for nurses to reduce stigma towards mental health

care users at primary health care services in the Western Cape

You have been caring for mental health care users (MHCU) either at primary health care services (Community health centre or Community Day clinic) or in the 72-hour assessment units. I would like to invite you to give your views on mental health stigma and its reduction intervention in the primary health facility.

SECTION A: DEMOGRAPHIC INFORMATION

A1. How old are you?

A2. Are you married?

A3. What is your high level of education?

A4. How long have been working in the current facility?

A5.How long have you been caring for mental health care users?

SECTION B: MENTAL HEALTH STIGMA AND ITS REDUCTION

INTERVENTION FROM NURSES' VIEWS

Questions	Sub questions
1. Explain the mental health stigma in the primary health care facility	1.1 Talk more about the perpetrators of mental health stigma at community health centre
	1.2. Explain the causes of mental health stigma in the community health centre
	1.3. Talk about the manifestations of mental health stigma
	1.4 Talk about types of mental disorders carrying stigma
	1.5 Talk about demography of mental health stigma
	1.6Talk about geography of mental health stigma
2. Suggest the intervention that can be used to reduce mental health stigma at community health	1.1 What can be done by the health care providers to reduce mental health stigma in the primary health care facility?
	1.2 What can be done by the health care facility management to reduce mental health stigma in the primary health care facility?

Appendix 3: Borrowed interview schedule

RESC Reference Number: PNM/11/12-73

<u>INTERVIEW
SCHEDULE</u>

Stigmatisation of People with Mental Illness: From Service Provider's Perspective

1. What is stigma in mental illness?

2. How do you think it operates in individuals and within society?

3. In your experience with patients, what is most common form of stigmatisation occurring in Malaysia?

4. Based on records, whom are the people typically stigmatising against the patients?

   a. Why do you think this group of people is more prone to stigmatise?

5. What types of mental illness see the most number of patients being stigmatised?

   a. Why do you think people with these illnesses are stigmatised more than patients of other mental health issues?

6. Please explain the impact of stigmatisation towards patients.

7. In your opinion/observation, where do stigmatisation often happen?

8. What do you think contribute to stigmatisation within the Malaysian context?

9. Given the opportunity to improve or prevent the phenomenon in Malaysia, what are some of your ideas to counter the situation?

Property of Ainul Nadhirah Hanafiah (2015)

Appendix 4: Request for permission to use interview guide

Mr. J.J. Musafiri   Dr. A. N. Hanafiah

University of the Western Cape

Faculty of Community and Health Sciences

School of Nursing   28 August 2019

Re: Permission to modify and use a semi-structured interview guide

Dear John,

Thank you very much for your interest to use the semi-structured interview guide that I developed. I am pleased to hear from a researcher with a similar interest in this area. You are welcomed to modify accordingly and use it.

Where appropriate, please cite my paper entitled "A qualitative exploration of the perspectives of mental health professionals on stigma and discrimination of mental illness in Malaysia (Hanafiah & Van Bortel, 2015)"

I wish you all the best.

Regards

Dr. A. N. Hanafiah
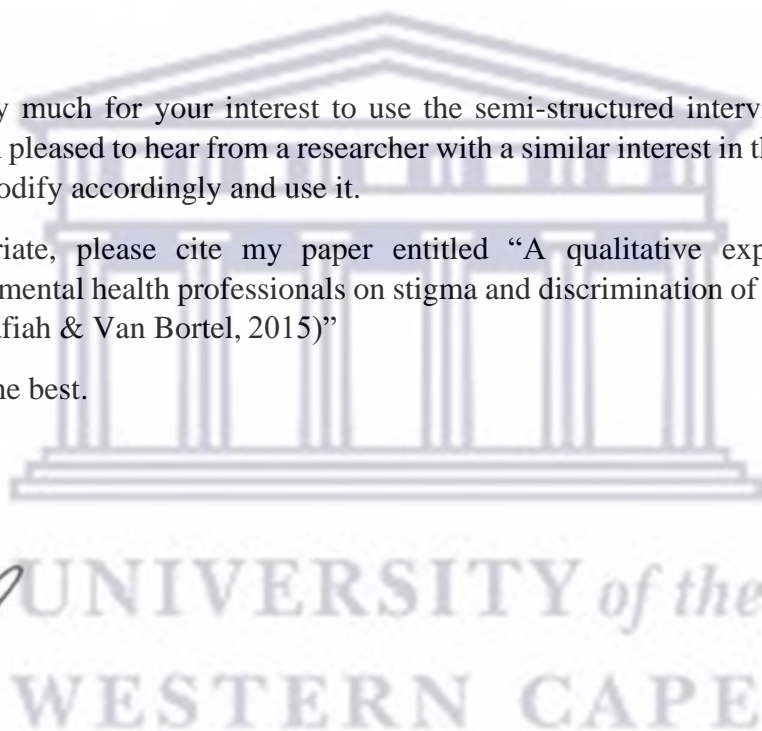
Appendix 5: Permission to use MHLS instrument

Mr. J.J. Musafiri   Dr. M. O'Connor

University of the Western Cape

Faculty of Community and Health Sciences

School of Nursing   27/08/2019

Subject: Permission to modify and use MHLS

Dear John,

Thank you very much for your interest in the MHLS, it is always a pleasure to hear from a researcher with a similar interest in this area. You are welcome to use and adapt the MHLS.

For the questions relating to Australia, we have been suggesting that researchers look at population level data for their country and modify the answer accordingly. In addition, given the changes in the DSM 5, we are suggesting that you modify:

Q5 to: To what extent do you think it is likely that Persistent Depressive Disorder (Dysthymia) is a disorder.

Q8 to: To what extent do you think it is likely that the diagnosis of Substance Abuse Disorder can include physical and psychological tolerance of the drug (i.e., require more of the drug to get the same effect).

Please keep us updated on your research as we would be interested to hear how it progresses.

Regards

Dr. M. O'Connor

M. O'C____

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Appendix 6: Permission to use CAMI

The researcher accessed the link https://camiscale.com/ and clicked on this link, then the option "download the CAMI scale" appeared. The researcher clicked on "download the CAMI scale" and accessed another link https://camiscale.com/cami-questionnaire/. The researcher filled in the form and checked the permission agreement box. Therefore, the researcher got the permission to use and modify the CAMI.

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Appendix 7: Information sheet for interview

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 9473 Fax: 27 21-959 3126

E-mail: 2928198@myuwc.ac.za

INFORMATION SHEET FOR INTERVIEW PARTICIPANTS

I hereby invite you to participate in a study, there will be a fair selection of the participants and your rights associated with research participation will be protected. The study will be explained to you and you will have opportunities to ask questions.

Project Title: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

What is this study about?

This is a research project being conducted by Mr. J.J. Musafiri at the University of the Western Cape. We are inviting you to participate in this research project because you are caring for mental health care users either at primary health care services or in the 72-hour assessment units and you meet the criteria to participate in the study. The purpose of this research project is to develop a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape through investigating an existing effective interventions on stigma reduction and by assessing the knowledge, beliefs and attitudes of nurses about mental health care users at primary health care facilities in the Western Cape.

What will I be asked to do if I agree to participate?

You will be asked to talk about your opinions on the interventions to reduce mental health stigma towards mental health care users at primary health care services in the Western Cape.

This study will be conducted at primary health care services (Community health centres and community day clinics) and in the 72-hour assessment units located in district hospitals within Cape Town Metropole. The interview will take 40 minutes.

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Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, you will be given your personal number that you will write on the questionnaire form.

To ensure your confidentiality, your forms with your personal information and recordings will be kept in safe and lockable place. If we write a report or article about this research project, your names will not be published and your identity will be protected. Only the researcher will have access to your identity.

What are the risks of this research?

There is no anticipated harm in this study. However, all human interactions and talking about self or others carry some amount of risks. The researcher will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about stigma reduction. We hope that, in the future, other people might benefit from this study through improved understanding of needs of stigma reduction towards mental health care users.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by *Mr. J.J. Musafiri, School of Nursing* at the University of the Western Cape. If you have any questions about the research study itself, please contact Mr. J.J. Musafiri at: 073 969 6784 or via e-mail 2928198@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact

Prof Chipps
Head of Department: School of Nursing

University of the Western Cape
Private Bag X17
Bellville 7535
 jchipps@uwc.ac.za

Prof A Rhoda
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za
This research has been approved by the University of the Western Cape's
biomedical ethics committee (REFERENCE NUMBER), by the Western Cape
Department of Health and Cape Town City Council.
BIOMEDICAL RESEARCH ETHICS ADMINISTRATION
Research Office
New Arts Building,C-Block, Top Floor, Room 28
University of the Western Cape, Private Bag X17, Bellville 7535
Email: research-ethics@uwc.ac.za

Tel: 021 959 2988

Appendix 8: Information sheet for survey

UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 9473 Fax: 27 21-959 3126

E-mail: 2928198@myuwc.ac.za

INFORMATION SHEET FOR SURVEY PARTICIPANTS

I hereby invite you to participate in a study, there will be a fair selection of the participants and your rights associated with research participation will be protected. The study will be explained to you and you will have opportunities to ask questions.

Project Title: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

What is this study about?

This is a research project being conducted by Mr. J.J. Musafiri at the University of the Western Cape. We are inviting you to participate in this research project because you are caring for mental health care users either at primary health care services or in the 72-hour assessment units and you meet the criteria for this study participation. The purpose of this research project is to develop mental health stigma reduction intervention protocol through investigating the existing effective interventions and by assessing the knowledge, beliefs and attitudes of nurses about mental health stigma at primary health care facilities in the Western Cape.

What will I be asked to do if I agree to participate?

You will be asked to give your perceptions about mental health knowledge, beliefs and attitudes towards mental health care users at primary health care services in the Western Cape. This study will be conducted at primary health care services (Community health centres and community day clinics) within Cape Town Metropole. The completion of the questionnaire form will take approximate 20 minutes.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, you will be given your personal number that you will write on the questionnaire form. Your personal information will kept separate from the questionnaire form that you will complete and your names will not be published. Only the researcher will have access to your identity.

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To ensure your confidentiality, your forms and eventual recordings will be kept in safe and lockable place. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

There is no anticipated harm in this study. However, all human interactions and talking about self or others carry some amount of risks. The researcher will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about stigma reduction. We hope that, in the future, other people might benefit from this study through improved understanding of needs of stigma reduction towards mental health care users.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by *Mr. J.J. Musafiri, School of Nursing* at the University of the Western Cape. If you have any questions about the research study itself, please contact Mr. J.J. Musafiri at: 073 969 6784 or via e-mail 2928198@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

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INFORMATION SHEET FOR NGT WORKSHOP PARTICIPANTS

I hereby invite you to participate in a study, there will be a fair selection of the participants and your rights associated with research participation will be protected. The study will be explained to you and you will have opportunities to ask questions.

Project Title: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

What is this study about?

This is a research project being conducted by Mr. J.J. Musafiri at the University of the Western Cape. We are inviting you to participate in this research project because you are caring for mental health care users either at primary health care services or in the 72-hour assessment units and you meet the criteria for this study participation. The purpose of this research project is to develop mental health stigma reduction intervention protocol through investigating the existing effective interventions and by assessing the knowledge, beliefs and attitudes of nurses about mental health stigma at primary health care facilities in the Western Cape.

What will I be asked to do if I agree to participate?

You will be invited to attend two workshops in which you will be asked to give and discuss your ideas on the development of a protocol for nurses to reduce stigma towards mental health care users. Each workshop will last 3hours and 30 minutes. The date, time and the private workshop venue within Cape Town Metropole will be announced to you via your e-mails and contact phone numbers. The first workshop will be a face-to-face while the second workshop can be either face-to-face or online.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution.

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To ensure your confidentiality, your forms and eventual recordings will be kept in safe and lockable place. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

There is no anticipated harm in this study. However, all human interactions and talking about self or others carry some amount of risks. The researcher will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about stigma reduction. We hope that, in the future, other people might benefit from this study through improved understanding of needs of stigma reduction towards mental health care users.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by *Mr. J.J. Musafiri, School of Nursing* at the University of the Western Cape. If you have any questions about the research study itself, please contact Mr. J.J. Musafiri at: 073 969 6784 or via e-mail 2928198@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof J Chipps
Head of Department: School of Nursing
University of the Western Cape
Private Bag X17
Bellville 7535
jchipps@uwc.ac.za

Prof A Rhoda
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 This research has been approved by the University of the Western Cape's biomedical ethics committee (REFERENCE NUMBER), by the Western Cape Department of Health and Cape Town City Council.

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Tel: 021 959 2988

Appendix 10: Consent form for survey

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 9473 Fax: 27 21-959 3126

E-mail: 2928198@myuwc.ac.za

CONSENT FORM FOR SURVEY PARTICIPANTS

Title of Research Project: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I understand that there is no anticipated harm in this study. I understand that I will be referred to a suitable professional for assistance or intervention if I experience any discomfort, psychological or otherwise during the process of your participation in this study.

Participant's name………………………..

Participant's signature………………………………

Date………………………

Appendix 11: Consent form for interview

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: + 233 20 801 4009, e-mail: 2928198@myuwc.ac.za

CONSENT FORM FOR INTERVIEW PARTICIPANTS

Title of Research Project: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I understand that there is no anticipated harm in this study. I understand that I will be referred to a suitable professional for assistance or intervention if I experience any discomfort, psychological or otherwise during the process of your participation in this study.

___ I agree to be audiotaped during my participation in this study.

___ I do not agree to be audiotaped during my participation in this study

Participant's name………………………..

Participant's signature……………………………….

Date…………………….

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Appendix 12: Consent form for NGT

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: + 233 20 801 4009, e-mail : <u>2928198@myuwc.ac.za</u>

<u>CONSENT FORM FOR NGT WORKSHOP PARTICIPANT</u>

Title of Research Project: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.I understand that there is no anticipated harm in this study. I understand that I will be referred to a suitable professional for assistance or intervention if I experience any discomfort, psychological or otherwise during the process of your participation in this study.

____ I agree to be audiotaped during my participation in this study.

____ I do not agree to be audiotaped during my participation in this study

Participant's name………………………..

Participant's signature……………………………….

Date……………………….

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Appendix 13: Ethics letter from 09 July 2019-09 July 2020

OFFICE OF THE DIRECTOR: RESEARCH
RESEARCH AND INNOVATION DIVISION

Private Bag X17, Bellville 7535
South Africa
T: +27 21 959 4111/2948
F: +27 21 959 3170
E: research-ethics@uwc.ac.za
www.uwc.ac.za

09 July 2019

Mr JJ Musafiri
School of Nursing
Faculty of Community and Health Sciences

Ethics Reference Number: BM19/4/20

Project Title: Development of a protocol for nurses to reduce
stigma towards mental health care users at primary
health care services in the Western Cape.

Approval Period: 09 July 2019 – 09 July 2020

I hereby certify that the Biomedical Science Research Ethics Committee of the
University of the Western Cape approved the scientific methodology and ethics of the
above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted
to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of
the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

BMREC REGISTRATION NUMBER -130416-050

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

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Appendix 14: Extended ethics letter

UNIVERSITY *of the* **WESTERN CAPE**

YEARS *of hope, action & knowledge*

11 January 2021

Mr JJ Musafiri
School of Nursing
Faculty of Community and Health Sciences

Ethics Reference Number: BM19/4/20

Project Title: Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

Approval Period: 20 November 2020 – 20 November 2023

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report annually by 30 November for the duration of the project.

Permission to conduct the study must be submitted to BMREC for record-keeping.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Director: Research Development
University of the Western Cape
Private Bag X 17
Bellville 7535
Republic of South Africa
Tel: +27 21 959 4111
Email: research-ethics@uwc.ac.za

NHREC Registration Number: BMREC-130416-050

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

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Appendix 15: Letter to the Depatement of Health

Department of Health Research Ethical Committee   Mr. J.J. Musafiri

PO BOX 2060   7 De Maas Road

Cape Town   Ruyterwacht

8000   7460

     Cape Town

     16 March 2019

Dear Sir/Madam

Subject: Request to conduct research at Department of Health

I am J.J. Musafiri, currently registered for PhD nursing programme at the University of the Western Cape. I am interested in conducting a study entitled "**Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape** " as part of the doctoral study. The study has been approved by the biomedical ethics committee at the University of the Western Cape.

I hereby request your permission to conduct my research in Community Health Centres (CHC) and Community Day Clinics (CDC) within eight health sub-districts namely Northern Panorama, Central or Western, Southern, Klipfontein, Mitchells Plain; Tygerberg, Khayelitsha and Helderberg or Eastern. The participants of this study will include nurses working in the abovementioned health facilities. The questionnaires will be distributed by the researcher at the agreed time by the participants and facility manager in order to not to disrupt the clinical service activities. This is a voluntary participation to the study. Participants will be informed about their right to withdraw from the study at any given time without any consequences. Therefore, all information will be kept confidential.

Thank you.
Yours sincerely
Mr. J. J. Musafiri
Cell no: 07396967

Appendix 16: Data extraction tool

<u>**Data extraction tool**</u>

Author/s & year	Country	Title	Aim	Design	Participants	Intervention	Comparison	Outcome

Appendix 17: Quality assessment tool for quantitative studies

COMPONENT RATINGS

A) SELECTION BIAS

(Q 1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely

2 Somewhat likely

3 Not likely

4 Can't tell

(Q 2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement

2 60 – 79% agreement

3 less than 60% agreement

4 Not applicable

5 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial

2 Controlled clinical trial

3 Cohort analytic (two group pre + post)

4 Case-control

5 Cohort (one group pre + post (before and after)

6 Interrupted time series

7 Other specify _____

8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No   Yes

If Yes, was the method of randomization described? (See dictionary)

No   Yes

If Yes, was the method appropriate? (See dictionary)

No   Yes

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

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C) CONFOUNDERS

(Q 1) Were there important differences between groups prior to the intervention?

1 Yes

2 No

3 Can't tell

The following are examples of confounders:

1 Race

2 Sex

3 Marital status/family

4 Age

5 SES (income or class)

6 Education

7 Health status

8 Pre-intervention score on outcome measure

(Q 2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 80 – 100% (most)

2 60 – 79% (some)

3 Less than 60% (few or none)

4 Can't Tell

390
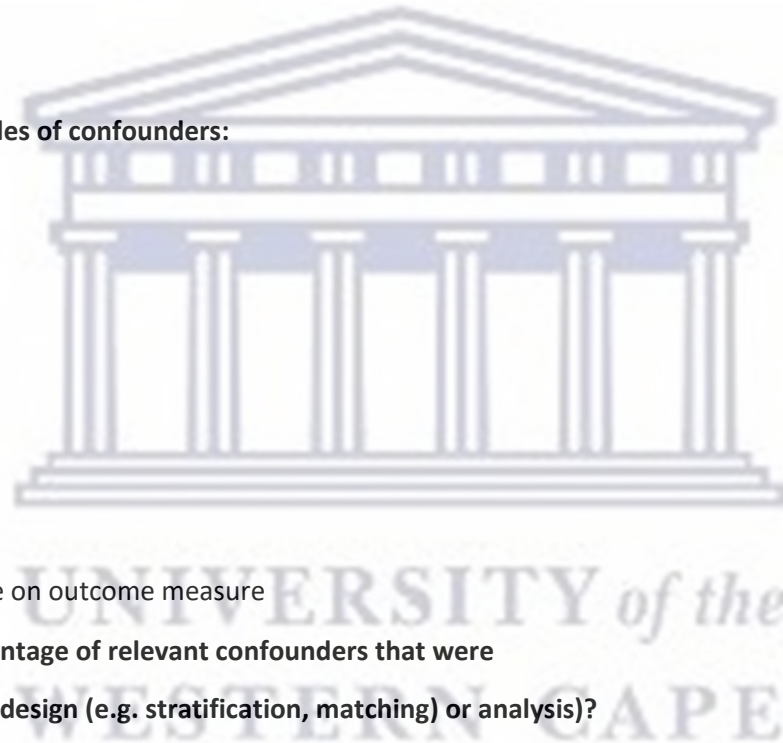
RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D) BLINDING

(Q 1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes

2 No

3 Can't tell

(Q 2) Were the study participants aware of the research question?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

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E) DATA COLLECTION METHODS

(Q 1) Were data collection tools shown to be valid?

1 Yes

2 No

3 Can't tell

(Q 2) Were data collection tools shown to be reliable?

1 Yes

2 No

3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F) WITHDRAWALS AND DROP-OUTS

(Q 1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes

2 No

3 Can't tell

4 Not Applicable (i.e. one-time surveys or interviews)

(Q 2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%

2 60 - 79%
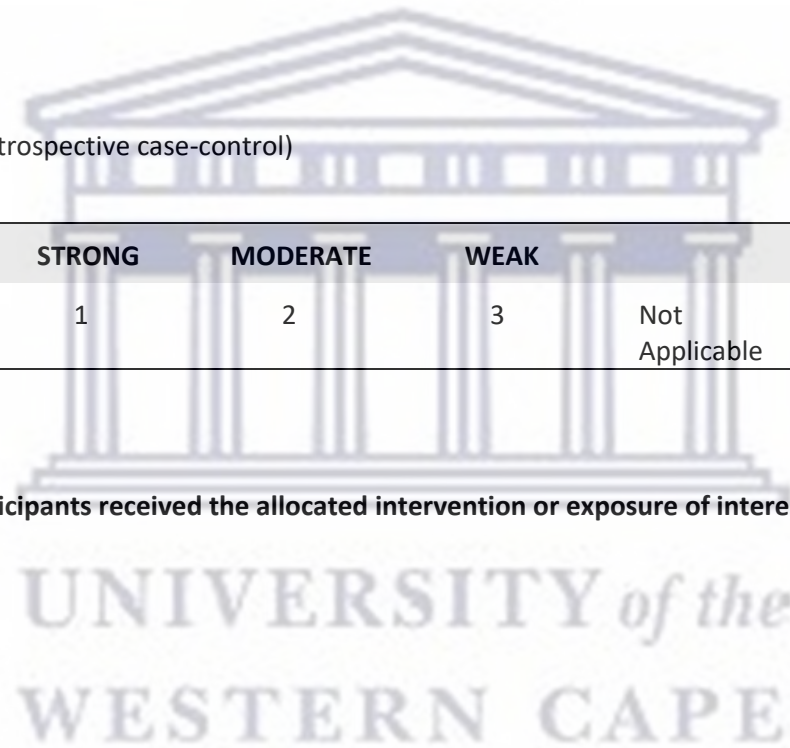
3 less than 60%

4 Can't tell

5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK	
See dictionary	1	2	3	Not Applicable

G) INTERVENTION INTEGRITY

(**Q1) What percentage of participants received the allocated intervention or exposure of interest?**

1 80 -100%

2 60 - 79%

3 less than 60%

4 Can't tell

(Q2) Was the consistency of the intervention measured?

    1 Yes

    2 No

    3 Can't tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?

    1 Yes

    2 No

    3 Can't tell

H) ANALYSES

(Q 1) Indicate the unit of allocation (circle one)

Community organization/institution practice/office individual

(Q 2) Indicate the unit of analysis (circle one)

Community organization/institution practice/office individual

(Q 3) Are the statistical methods appropriate for the study design?

1 Yes

2 No

3 Can't tell

(Q 4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?

1 Yes

2 No

3 Can't tell

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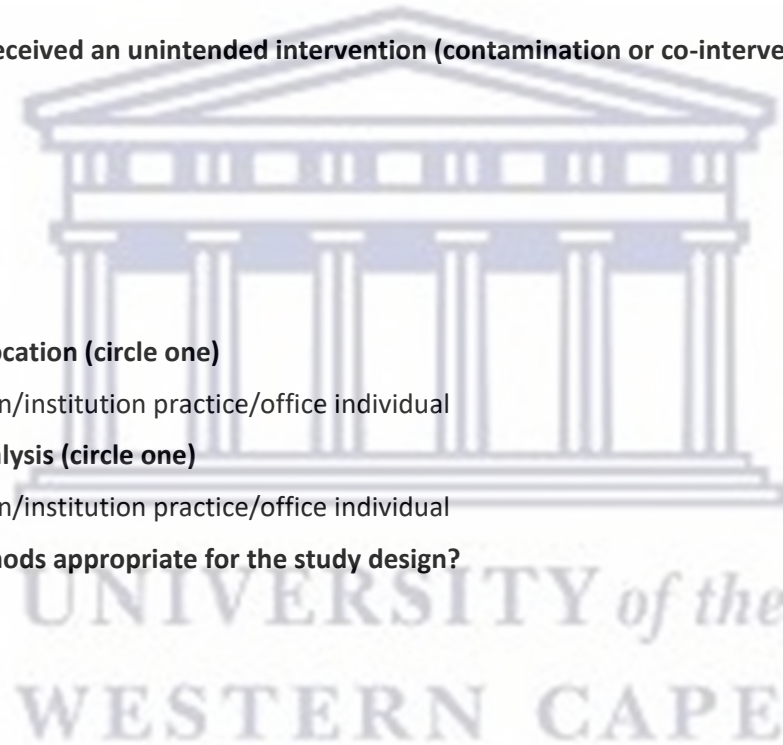
GLOBAL RATING

COMPONENT RATINGS

Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

A	SELECTION BIAS	STRONG	MODERATE	WEAK	
		1	2	3	
B	STUDY DESIGN	STRONG	MODERATE	WEAK	
		1	2	3	
C	CONFOUNDERS	STRONG	MODERATE	WEAK	
		1	2	3	
D	BLINDING	STRONG	MODERATE	WEAK	
		1	2	3	
E	DATA COLLECTION METHOD	STRONG	MODERATE	WEAK	
		1	2	3	
F	WITHDRAWALS AND DROPOUTS	STRONG	MODERATE	WEAK	
		1	2	3	Not Applicable

GLOBAL RATING FOR THIS PAPER (circle one):

1	STRONG	(no WEAK ratings)
2	MODERATE	(one WEAK rating)
3	WEAK	(two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No   Yes

If yes, indicate the reason for the discrepancy

1 Oversight

2 Differences in interpretation of criteria

3 Differences in interpretation of study

Final decision of both reviewers (circle one):

1 STRONG
2 MODERATE
3 WEAK

Quality Assessment Tool

for Quantitative Studies

Dictionary

The purpose of this dictionary is to describe items in the tool thereby assisting raters to score study quality. Due to under-reporting or lack of clarity in the primary study, raters will need to make judgements about the extent that bias may be present. When making judgements about each component, raters should form their opinion based upon information contained in the study rather than making inferences about what the authors intended. Mixed methods studies can be quality assessed using this tool with the quantitative component of the study.

A) SELECTION BIAS

(Q 1) Participants are more likely to be representative of the target population if they are randomly selected from a comprehensive list of individuals in the target population (score very likely). They may not be representative if they are referred from a source (e.g. clinic) in a systematic manner (score somewhat likely) or self-referred (score not likely).

(Q 2) Refers to the % of subjects in the control and intervention groups that agreed to participate in the study before they were assigned to intervention or control groups.

B) STUDY DESIGN

In this section, raters assess the likelihood of bias due to the allocation process in an experimental study. For observational studies, raters assess the extent that assessments of exposure and outcome are likely to be independent. Generally, the type of design is a good indicator of the extent of bias. In stronger designs, an equivalent control group is present and the allocation process is such that the investigators are unable to predict the sequence.

Randomized Controlled Trial (RCT)

An experimental design where investigators randomly allocate eligible people to an intervention or control group. A rater should describe a study as an RCT if the randomization sequence allows each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. If the investigators do not describe the allocation process and only use the words 'random' or 'randomly', the study is described as a controlled clinical trial.

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See below for more details.

Was the study described as randomized?

Score YES, if the authors used words such as random allocation, randomly assigned, and random assignment.

Score NO, if no mention of randomization is made.

Was the method of randomization described?

Score YES, if the authors describe any method used to generate a random allocation sequence.

Score NO, if the authors do not describe the allocation method or describe methods of allocation such as alternation, case record numbers, dates of birth, day of the week, and any allocation procedure that is entirely transparent before assignment, such as an open list of random numbers of assignments.

If NO is scored, then the study is a controlled clinical trial.

Was the method appropriate?

Score YES, if the randomization sequence allowed each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. Examples of appropriate approaches include assignment of subjects by a central office unaware of subject characteristics, or sequentially numbered, sealed, opaque envelopes.

Score NO, if the randomization sequence is open to the individuals responsible for recruiting and allocating participants or providing the intervention, since those individuals can influence the allocation process, either knowingly or unknowingly.

If NO is scored, then the study is a controlled clinical trial.

Controlled Clinical Trial (CCT)

An experimental study design where the method of allocating study subjects to intervention or control groups is open to individuals responsible for recruiting subjects or providing the intervention. The method of allocation is transparent before assignment, e.g. an open list of random numbers or allocation by date of birth, etc.

Cohort analytic (two group pre and post)

An observational study design where groups are assembled according to whether or not exposure to the intervention has occurred. Exposure to the intervention is not under the control of the investigators. Study groups might be nonequivalent or not comparable on some feature that affects outcome.

Case control study

A retrospective study design where the investigators gather 'cases' of people who already have the outcome of interest and 'controls' who do not. Both groups are then questioned or their records examined about whether they received the intervention exposure of interest.

Cohort (one group pre + post (before and after)

The same group is pretested, given an intervention, and tested immediately after the intervention. The intervention group, by means of the pretest, act as their own control group.

Interrupted time series

A study that uses observations at multiple time points before and after an intervention (the 'interruption'). The design attempts to detect whether the intervention has had an effect significantly greater than any underlying trend over time. Exclusion: Studies that do not have a clearly defined point in time when the intervention occurred and at least three data points before and three after the intervention

Other:

One-time surveys or interviews

C) CONFOUNDERS

By definition, a confounder is a variable that is associated with the intervention or exposure and causally related to the outcome of interest. Even in a robust study design, groups may not be balanced with respect to important variables prior to the intervention. The authors should indicate if confounders were controlled in the design (by stratification or matching) or in the analysis. If the allocation to intervention and control groups is randomized, the authors must report that the groups were balanced at baseline with respect to confounders (either in the text or a table).

D) BLINDING

(Q 1) Assessors should be described as blinded to which participants were in the control and intervention groups. The purpose of blinding the outcome assessors (who might also be the care providers) is to protect against detection bias.

(Q 2) Study participants should not be aware of (i.e. blinded to) the research question. The purpose of blinding the participants is to protect against reporting bias.

E) DATA COLLECTION METHODS

Tools for primary outcome measures must be described as reliable and valid. If 'face' validity or 'content' validity has been demonstrated, this is acceptable. Some sources from which data may be collected are described below:

Self-reported data includes data that is collected from participants in the study (e.g. completing a questionnaire, survey, answering questions during an interview, etc.).

Assessment/Screening includes objective data that is retrieved by the researchers. (e.g. observations by investigators).

Medical Records/Vital Statistics refers to the types of formal records used for the extraction of the data.

Reliability and validity can be reported in the study or in a separate study. For example, some standard assessment tools have known reliability and validity.

F) WITHDRAWALS AND DROP-OUTS

Score **YES** if the authors describe BOTH the numbers and reasons for withdrawals and drop-outs.
Score **NO** if either the numbers or reasons for withdrawals and drop-outs are not reported.
Score **NOT APPLICABLE** if the study was a one-time interview or survey where there was not follow-up data reported.
The percentage of participants completing the study refers to the % of subjects remaining in the study at the final data collection period in all groups (i.e. control and intervention groups).

G) INTERVENTION INTEGRITY

The number of participants receiving the intended intervention should be noted (consider both frequency and intensity). For example, the authors may have reported that at least 80 percent of the participants received the complete intervention. The authors should describe a method of measuring if the intervention was provided to all participants the same way. As well, the authors should indicate if subjects received an unintended intervention that may have influenced the outcomes. For example, co-intervention occurs when the study group receives an additional intervention (other than that intended). In this case, it is possible that the effect of the intervention may be overestimated. Contamination refers to situations where the control group accidentally receives the study intervention. This could result in an under-estimation of the impact of the intervention.

H) ANALYSIS APPROPRIATE TO QUESTION

Was the quantitative analysis appropriate to the research question being asked?

An intention-to-treat analysis is one in which all the participants in a trial are analyzed according to the intervention to which they were allocated, whether they received it or not. Intention-to-treat analyses are favoured in assessments of effectiveness as they mirror the noncompliance and treatment changes that are likely to occur when the intervention is used in practice, and because of the risk of attrition bias when participants are excluded from the analysis.

Component Ratings of Study:

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For each of the six components A – F, use the following descriptions as a roadmap.

A) SELECTION BIAS

Good: The selected individuals are very likely to be representative of the target population (Q1 is 1) **and** there is greater than 80% participation (Q2 is 1).

Fair: The selected individuals are at least somewhat likely to be representative of the target population (Q1 is 1 or 2); **and** there is 60 - 79% participation (Q2 is 2). 'Moderate' may also be assigned if Q1 is 1 or 2 and Q2 is 5 (can't tell).

Poor: The selected individuals are not likely to be representative of the target population (Q1 is 3); **or** there is less than 60% participation (Q2 is 3) **or** selection is not described (Q1 is 4); and the level of participation is not described (Q2 is 5).

B)DESIGN

Good: will be assigned to those articles that described RCTs and CCTs.

Fair: will be assigned to those that described a cohort analytic study, a case control study, a cohort design, or an interrupted time series.

Weak: will be assigned to those that used any other method or did not state the method used.

C) CONFOUNDERS

Good: will be assigned to those articles that controlled for at least 80% of relevant confounders (Q1 is 2); **or** (Q2 is 1).

Fair: will be given to those studies that controlled for 60 – 79% of relevant confounders (Q1 is 1) **and** (Q2 is 2).

Poor: will be assigned when less than 60% of relevant confounders were controlled (Q1 is 1) **and** (Q2 is 3) **or** control of confounders was not described (Q1 is 3) **and** (Q2 is 4).

D) BLINDING

Good: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **and t**he study participants are not aware of the research question (Q2 is 2).

Fair: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **or** the study participants are not aware of the research question (Q2 is 2).

Poor: The outcome assessor is aware of the intervention status of participants (Q1 is 1); **and** the study participants are aware of the research question (Q2 is 1); **or b**linding is not described (Q1 is 3 and Q2 is 3).

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E) DATA COLLECTION METHODS

Good: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have been shown to be reliable (Q2 is 1).

Fair: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have not been shown to be reliable (Q2 is 2) **or** reliability is not described (Q2 is 3).

Poor: The data collection tools have not been shown to be valid (Q1 is 2) **or** both reliability and validity are not described (Q1 is 3 and Q2 is 3).

F) WITHDRAWALS AND DROP-OUTS - a rating of:

Good: will be assigned when the follow-up rate is 80% or greater (Q1 is 1 and Q2 is 1).

Fair: will be assigned when the follow-up rate is 60 – 79% (Q2 is 2) **OR** Q1 is 4 or Q2 is 5.

Poor: will be assigned when a follow-up rate is less than 60% (Q2 is 3) or if the withdrawals and drop-outs were not described (Q1 is No or Q2 is 4).

Not Applicable: if Q1 is 4 or Q2 is 5.

402
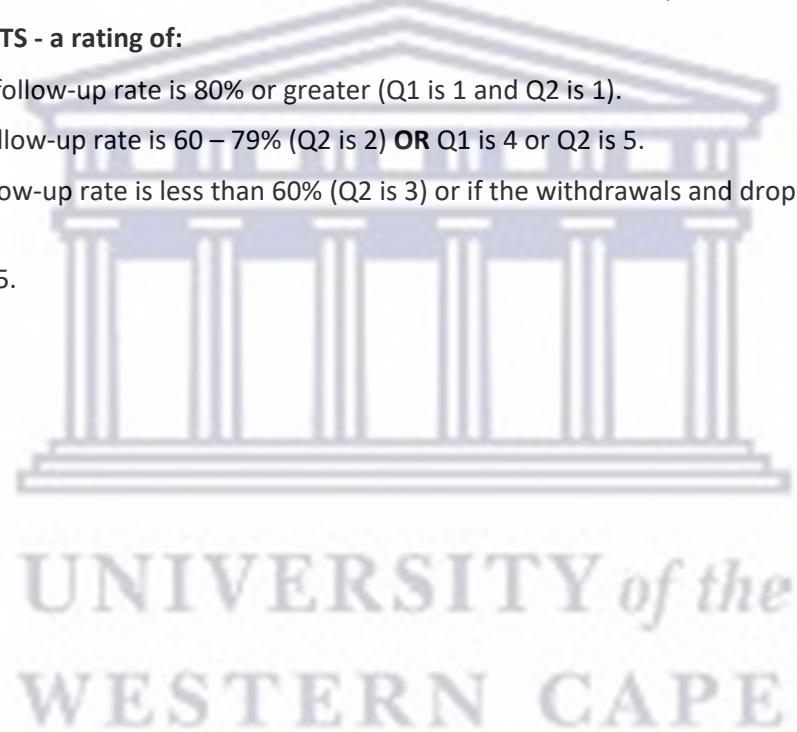
Appendix 18: The draft of the protocol

A protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

John James Musafiri

Prof. M. Bimerew

Background

Primary health care emphasizes the wider determinants of health and targets comprehensive health services namely physical health, social health, mental health and wellbeing aspects that interact each other (World Health Organization, 2021). It prevents and treats diseases, and promotes health at individual level, family level, and community level (World Health Organization, 2021). It provides care for an individual' needs as the whole-person across the lifespan, does not target specific diseases but it is the most efficient and inclusive approach to promote people's physical and mental health (World Health Organization, 2021). It needs support from governments at all levels to implement its philosophy of care, overcome the challenges that need interventions beyond the health sector, ensure integration of people's health in all government policies (World Health Organization, 2021). Stigma can be view as a complex multilevel social process (Thornicroft et al., 2022).

Within South Africa, an integrated and holistic approach of stakeholders and many government departments should be involved in addressing mental health issues (Western Cape Department Health, 2021). However, the integration of mental health care services faces challenges. Those challenges include insufficient financial resources allocated to mental health care, lack of human resources allocated to mental health care, primary health care nurses without mental health knowledge and skills, shortage of nurses leading to their work overload, and stigma towards mental health care users (Middleton, 2020). Although the South African Mental Health Act 17 of 2002 underscores the need for reduction of mental health stigma (Republic of South Africa, 2002), this phenomenon still occurs at various levels: organization (politicians/policy makers/stakeholders), health care institutions (all levels of care) such as primary health care families and health care providers amongst primary health care nurses,

and in the community. Combination of educational intervention and contact intervention, educational intervention, and contact intervention were found effective in reducing public generation and health care providers' mental health stigma.

This protocol designed for primary health care nurses to reduce stigma towards mental health care users at primary health care services is seen as a guiding checklist to reduce mental health stigma. To reach the aim of this protocol, there is a need to consider the ecological aspects of mental health stigma and reduce this phenomenon simultaneously across three levels. Otherwise, it might be not effective to focus only on primary health care nurses without involving organizational structure, health care system, and primary health care facility administration that influence the stigmatization process (Henderson et al., 2014; Riffel & Chen, 2020).

This protocol involves three components namely organizational/structural level, primary health care administrative staff members level and primary health care nurses level. The evidences generated from phase 1 (survey), phase 2 (semi-structed interviews and phase 3 (Systematic review) are synthesized towards the development of this protocol. This protocol comprises the aim, objectives, rationale, scope, principles, strategies, algorithm, three components, checklists, and expected interventions' outcomes.

Aim of the protocol

The aim is to provide guidelines to the primary health care nurses to reduce stigma towards mental health care users.

Objectives

The objectives of this protocol are:

- To guide the primary health care nurses on the need of mental health training towards mental health stigma reduction at the PHC level.

- To advocate for the representation of the mental health care users in the relevant levels associated with mental health services delivery towards their participation in decision-making, equal treatment and stigma reduction.

- To recommend the use of relevant documents such as checklists for mental health training and incident reports on mental health stigma.

Rationale

- This protocol will demonstrate the guidelines for reducing menta health stigma among primary health care nurses while involving three components as stigma phenomenon is influenced by internal and external factors.

- This protocol will alert mental health services at national, provincial and district levels to support integration of mental health services into primary health care by attending the current challenges. Those challenges include lack of mental health policies, inadequate human and financial resources, poor communication between management and primary health care staff, lack of knowledgeable and skilled primary health care nurses in mental health, and stigma attached to mental disorders (Hlongwa & Sibiya, 2019).

- It will ensure that the management of primary health care facilities support mental health services through mental training of all personnel employed at that level.

- It will also ensure that all primary health nurses get opportunity to learn basics mental health disorders and related stigma and ensure that mental health nurses at primary health care level are supported by facility management and fellow nurses.

- This protocol will ensure that the voice of mental health care users is heard through their representation in the relevant committees at organisation and health care facilities' level towards improvement of service delivery and mental health stigma reduction.

- This protocol recommends a good and sustainable communication between the health care services and mental health care users.

Scope of the protocol

- This protocol is designed for primary health care nurses and it is based on based on evidences from systematic review findings.

- It is relevant to the South African context and will be regularly revised when there is a need.

- This protocol does not intend to evaluate its implementation; however, the researcher of this study will present this protocol in the conferences with the policy makers to create awareness of the use of this protocol.

The principles underpinning the protocol

- This protocol should be seen as a guide checklist to reduce mental health stigma.

- This protocol is designed based on evidences from the survey, individual interviews, systematic review findings.

- This protocol is relevant to the South African context.

- This protocol addresses mental health stigma reduction and it is applicable to the primary health care nurses.

- This protocol will be revised on regular basis and based on the needs.

- This protocol recommends the voice of mental health care users through their representation in the committees dealing with mental health services at all the levels.

- This protocol recommends that all primary health care nurses should attend the introduction to mental health and related stigma, and have exposure to mental health care users. A checklist will be used to ensure the compliance with compulsory mental health training.

- This protocol supports the belief in recovery from mental disorders and stable mental health care users' contribution to the South African economy.

Strategies of the protocol

- To reduce mental health stigma, primary health care nurses should be aware of language and action attached to mental health stigma.

- This protocol should be included in the mental health care policies and South African mental health care Act 17 of 2022.

- Incident reports on mental health stigma will be introduced in the health care system.

- A checklist will be used to monitor mental health training and exposure.

- South African Nursing Council will make the introduction to mental health and related stigma, and exposure to mental health care users a requirement for continuing professional development on annual basis.

- The community members attending services at primary health care level will be aware that the existing boxes for complaints, compliments and suggestions can be used for mental health as well.

- Th managers of primary health care facilities should ensure that mental health care users get equal treatment like patients with other conditions.

- The managers of primary health care facilities should ensure that mental health care users are in any of consultation offices used by professional nurses.

- The managers of primary health care facilities should ensure that nurses receive introduction to mental health training.

Algorithm for the protocol

The algorithm presents the process of menta health stigma at organization, primary health care facility and primary health care nurses levels (See figure 1).
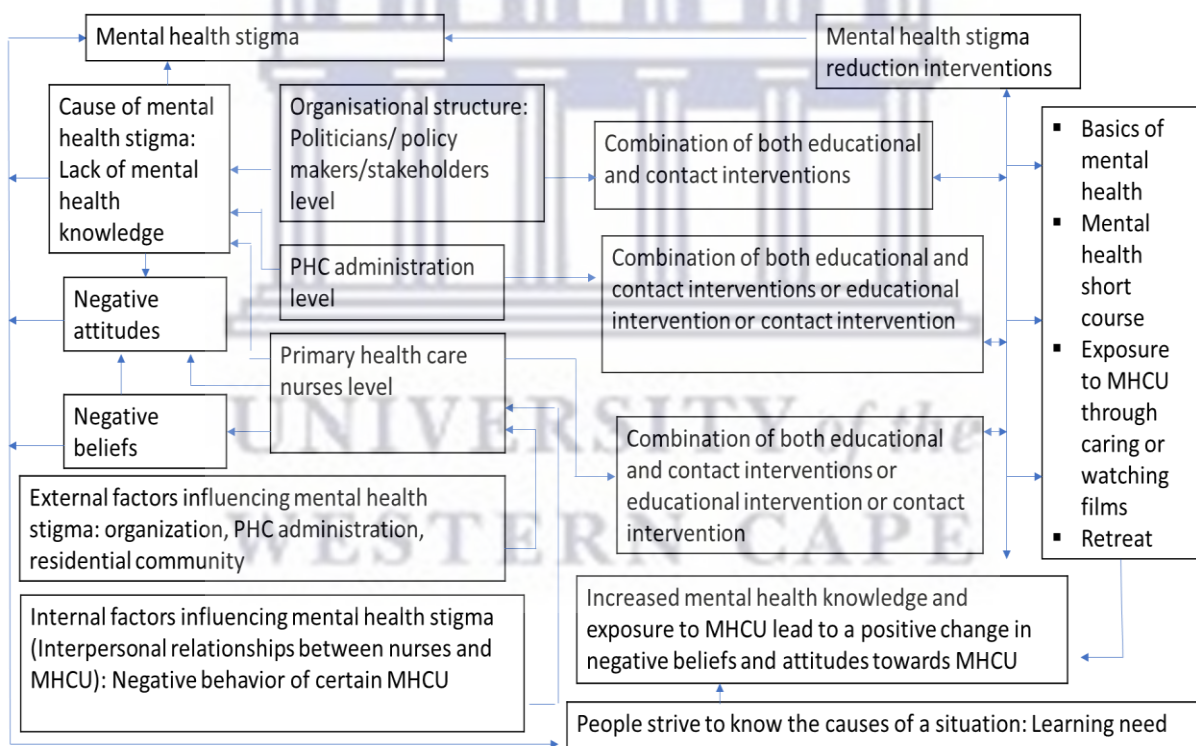

Figure 1: Protocol for PHC nurses to reduce stigma towards mental health care users

Checklist

Select the statements that you view as a required item to be included in the checklist for basic mental health training for primary health care nurses (See Table 1). You will list the items based on their importance according to your opinion. You are welcomed to suggest more items.

Table 1: Checklist for PHC nurses' mental health training

No	Items
	Educational intervention
1	Definition of mental illness
2	Culture and mental illness
3	Definitions of the mental disorders included in this checklist
4	Causes/risks factors of the mental disorders included in this checklist
5	Symptoms of the mental disorders included in this checklist
6	Effects of various types of management of the mental disorders included in this checklist
7	Introduction to mood disorders
8	Introduction to depression
9	Introduction to bipolar mood disorder.
10	Introduction to anxiety disorders.
11	Introduction to psychotic disorders
12	Introduction to neurocognitive disorders
13	Introduction to delirium
14	Introduction to dementia
15	Introduction to suicide
16	Introduction to intellectual disability
17	Introduction to substance use disorders
18	Management of aggression
19	Introduction to pharmacological management of mental disorders and effects
20	Management of Mental Illness: Psychoeducation
21	Introduction to Mental Health Care Act 17 of 2002
22	Management of Mental Illness: Lifestyle Advice
23	Management of Mental Illness: Psychosocial rehabilitation
24	Management of Mental Illness: Psychotherapy
25	Management of Mental Illness: follow-up

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26	Definition of stigma
27	Definition of mental health stigma
28	Causes of mental health stigma
29	Influence of cultural beliefs on mental health stigma
30	Negative beliefs about mental disorders
31	Negative attitude towards mental health care users
32	Types of mental health stigma
33	Consequences of mental health stigma on the lives of mental health care users
	Contact intervention
34	Direct contact with menta health care user before recovery
35	Direct contact with menta health care user in recovery state
36	Indirect contact with menta health care user in recovery state
	Additional items for educational intervention
37	
38	
39	
40	
	Additional items for contact intervention
41	
42	
43	
44	
45	

Expected outcomes

- Development of the protocol for nurses to reduce stigma towards mental health care users at primary health care services

- Increased in basics of mental health knowledge among PHC nurses

- Decreased PHC nurses' negative beliefs about people with mental disorders

- Decreased PHC nurses' negative attitudes about people with mental disorders

- Representation of MHCU in the committees associated with mental health care services

- Improved integration of health care services into primary care

Appendix 19: CAMI

The following statements express various opinions about mental illness and the mentally ill. The mentally ill refers to people needing treatment for mental disorders but who are capable of independent living outside a hospital. Please circle the response which most accurately describes your reaction to each statement. It's your first reaction which is important. Don't be concerned if some statements seem similar to ones you have previously answered. Please be sure to answer all statements.

a. As soon as a person shows signs of mental disturbance, he should be hospitalized.

    SA   A   N   D   SD

b. More tax money should be spent on the care and treatment of the mentally ill.

    SA   A   N   D   SD

c. The mentally ill should be isolated from the rest of the community.

    SA   A   N   D   SD

d. The best therapy for many mental patients is to be part of a normal community.

    SA   A   N   D   SD

e. Mental illness is an illness like any other.

    SA   A   N   D   SD

f. The mentally ill are a burden on society.

    SA   A   N   D   SD

g. The mentally ill are far less of a danger than most people suppose.

    SA   A   N   D   SD

h. Locating mental health facilities in a residential area downgrades the neighbourhood.

    SA   A   N   D   SD

i. There is something about the mentally ill that makes it easy to tell them from normal people.

    SA   A   N   D   SD

j. The mentally ill have for too long been the subject of ridicule.

    SA   A   N   D   SD

k. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.

    SA   A   N   D   SD

l. As far as possible mental health services should be provided through community-based facilities.

    SA   A   N   D   SD

m. Less emphasis should be placed on protecting the public from the mentally ill.

    SA   A   N   D   SD

n. Increased spending on mental health services is a waste of tax dollars.

    SA   A   N   D   SD

o. No one has the right to exclude the mentally ill from their neighbourhood.

    SA   A   N   D   SD

p. Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great.

    SA   A   N   D   SD

q. Mental patients need the same kind of control and discipline as a young child.

    SA   A   N   D   SD

r. We need to adopt a far more tolerant attitude toward the mentally ill in our society.

    SA   A   N   D   SD

s. I would not want to live next door to someone who has been mentally ill.

    SA   A   N   D   SD

t. Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community.

    SA   A   N   D   SD

u. The mentally ill should not be treated as outcasts of society.

    SA   A   N   D   SD

v. There are sufficient existing services for the mentally ill.

    SA   A   N   D   SD

w. Mental patients should be encouraged to assume the responsibilities of normal life.

    SA   A   N   D   SD

x. Local residents have good reason to resist the location of mental health services in their neighbourhood.

    SA   A   N   D   SD

y. The best way to handle the mentally ill is to keep them behind locked doors.

    SA   A   N   D   SD

z. Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for.

    SA   A   N   D   SD

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aa. Anyone with a history of mental problems should be excluded from taking public office.

SA   A   N   D   SD

bb. Locating mental health services in residential neighbourhoods does not endanger local residents.

SA   A   N   D   SD

cc. Mental hospitals are an outdated means of treating the mentally ill.

SA   A   N   D   SD

dd. The mentally ill do not deserve our sympathy.

SA   A   N   D   SD

ee. The mentally ill should not be denied their individual rights.

SA   A   N   D   SD

ff. Mental health facilities should be kept out of residential neighbourhoods.

SA   A   N   D   SD

gg. One of the main causes of mental illness is a lack of self-discipline and will power.

SA   A   N   D   SD

hh. We have the responsibility to provide the best possible care for the mentally ill.

SA   A   N   D   SD

ii. The mentally ill should not be given any responsibility.

SA   A   N   D   SD

jj. Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services.

SA   A   N   D   SD

kk. Virtually anyone can become mentally ill.

SA   A   N   D   SD

ll. It is best to avoid anyone who has mental problems.
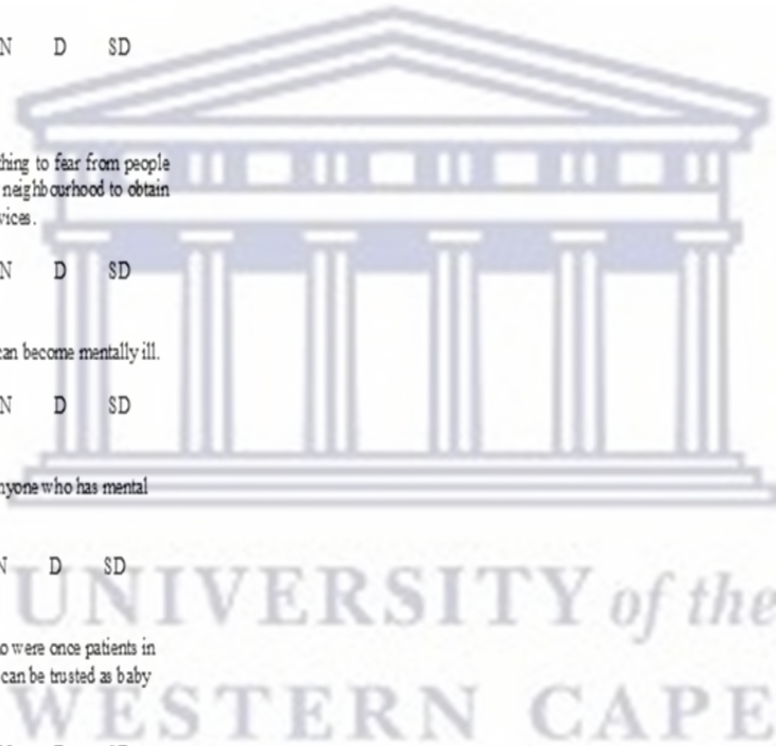
SA   A   N   D   SD

mm. Most women who were once patients in a mental hospital can be trusted as baby sitters.

SA   A   N   D   SD

nn. It is frightening to think of people with mental problems living in residential neighbourhoods.

SA   A   N   D   SD

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Appendix 20: MHLS

Mental Health Literacy Scale

The purpose of these questions is to gain an understanding of your knowledge of various aspects to do with mental health. When responding, we are interested in your degree of knowledge.

Therefore when choosing your response, consider that: Very

unlikely = I am certain that it is NOT likely Unlikely = I think it is

unlikely but am not certain Likely = I think it is likely but am not

certain

Very Likely = I am certain that it IS very likely

1

If someone became extremely nervous or anxious in one or more situations with other people (e.g., a party) or performance situations (e.g., presenting at a meeting) in which they were afraid of being evaluated by others and that they would act in a way that was humiliating or feel embarrassed, then to what extent do you think it is likely they have **Social Phobia**

Very unlikely   Unlikely   Likely   Very Likely

2

If someone experienced excessive worry about a number of events or activities where this level of concern was not warranted, had difficulty controlling this worry and had physical symptoms such as having tense muscles and feeling fatigued then to what extent do you think it is likely they have **Generalised Anxiety Disorder**

Very unlikely   Unlikely   Likely   Very Likely

3

If someone experienced a low mood for two or more weeks, had a loss of pleasure or interest in their normal activities and experienced changes in their appetite and sleep then to what extent do you think it is likely they have **Major Depressive Disorder**

Very unlikely   Unlikely   Likely   Very Likely

4

To what extent do you think it is likely that **Personality Disorders** are a category of mental illness

Very unlikely   Unlikely   Likely   Very Likely

5

To what extent do you think it is likely that **Dysthymia** is a disorder

Very unlikely   Unlikely   Likely   Very Likely

6

To what extent do you think it is likely that the diagnosis of **Agoraphobia** includes anxiety about situations where escape may be difficult or embarrassing

Very unlikely   Unlikely   Likely   Very Likely

 7

To what extent do you think it is likely that the diagnosis of **Bipolar Disorder** includes experiencing periods of elevated (i.e., high) and periods of depressed (i.e., low) mood

Very unlikely   Unlikely   Likely   Very Likely

8

To what extent do you think it is likely that the diagnosis of **Drug Dependence** includes physical and psychological tolerance of the drug (i.e., require more of the drug to get the same effect)

Very unlikely   Unlikely   Likely   Very Likely

9

To what extent do you think it is likely that in general in Australia, **women are MORE likely to experience a mental illness of any kind compared to men**

Very unlikely   Unlikely   Likely   Very Likely

10

To what extent do you think it is likely that in general, in Australia**, men are MORE likely to experience an anxiety disorder compared to women**

Very unlikely   Unlikely   Likely   Very Likely

When choosing your response, consider that:

- Very Unhelpful = I am certain that it is <u>NOT</u> helpful

- Unhelpful = I think it is unhelpful but am not certain

- Helpful = I think it is helpful but am not certain

- Very Helpful = I am certain that it <u>IS</u> very helpful

11

To what extent do you think it would be helpful for someone to **improve their quality of sleep** if they were having difficulties managing their emotions (e.g., becoming very anxious or depressed)

12

To what extent do you think it would be helpful for someone to **avoid all activities or situations that made them feel anxious** if they were having difficulties managing their emotions

Very unhelpful   Unhelpful   Helpful   Very helpful

When choosing your response, consider that:

- Very unlikely = I am certain that it is <u>NOT</u> likely

- Unlikely = I think it is unlikely but am not certain

- Likely = I think it is likely but am not certain

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- Very Likely = I am certain that it <u>IS</u> very likely

13

To what extent do you think it is likely that **<u>Cognitive Behaviour Therapy (CBT)</u>** is a therapy based on

challenging negative thoughts and increasing helpful behaviours

| Very unlikely | Unlikely | Likely | Very Likely |

14

Mental health professionals are bound by confidentiality; however there are certain conditions under

which this does not apply.

To what extent do you think it is likely that the following is a condition that would allow a mental

health professional to **<u>break confidentiality</u>**:

If you are at immediate risk of harm to yourself or others

| Very unlikely | Unlikely | Likely | Very Likely |

15

Mental health professionals are bound by confidentiality; however there are certain conditions under

which this does not apply.

To what extent do you think it is likely that the following is a condition that would allow a mental

health professional to **<u>break confidentiality</u>**:

if your problem is not life-threatening and they want to assist others to better support you
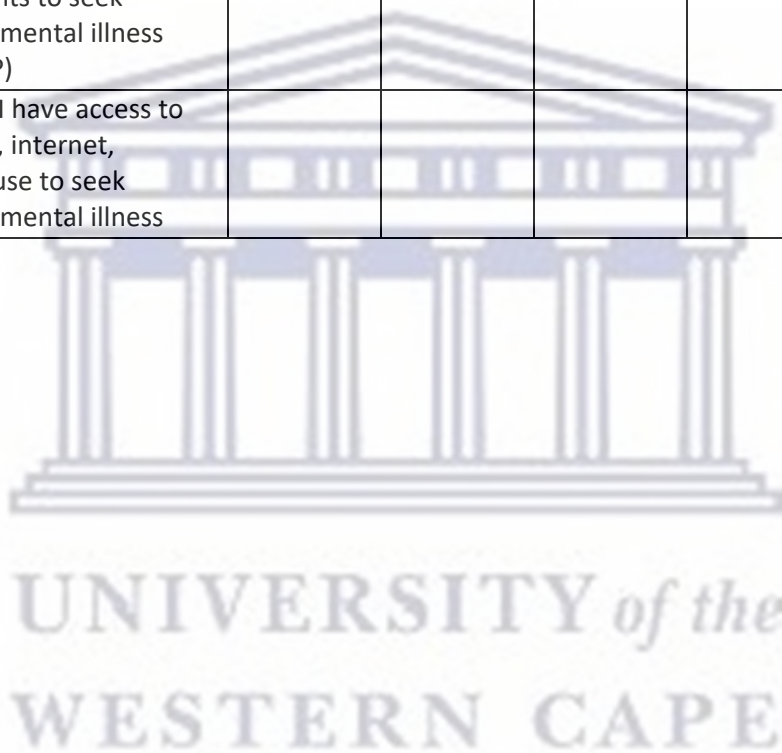
| Very unlikely | Unlikely | Likely | Very Likely |

Please indicate to what extent you agree with the following statements:

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
16. I am confident that I know where to seek information about mental illness					
17. I am confident using the computer or telephone to seek information about mental illness					
18. I am confident attending face to face appointments to seek information about mental illness (e.g., seeing the GP)					
19. I am confident I have access to resources (e.g., GP, internet, friends) that I can use to seek information about mental illness					

Please indicate to what extent you agree with the following statements:

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
20. People with a mental illness could snap out if it if they wanted					
21. A mental illness is a sign of personal weakness					
22. A mental illness is not a real medical illness					
23. People with a mental illness are dangerous					
24. It is best to avoid people with a mental illness so that you don't develop this problem					
25. If I had a mental illness I would not tell anyone					
26. Seeing a mental health professional means you are not strong enough to manage your own difficulties					
27. If I had a mental illness, I would not seek help from a mental health professional					
28. I believe treatment for a mental illness, provided by a mental health professional, would not be effective					

Please indicate to what extent you agree with the following statements:

	Definitely unwilling	Probably unwilling	Neither unwilling or willing	Probably willing	Definitely willing
29. How willing would you be to move next door to someone with a mental illness?					
30. How willing would you be to spend an evening socialising with someone with a mental illness?					
31. How willing would you be to make friends with someone with a mental illness?					

	Definitely unwilling	Probably unwilling	Neither unwilling or willing	Probably willing	Definitely willing
32. How willing would you be to have someone with a mental illness start working closely with you on a job?					
33. How willing would you be to have someone with a mental illness marry into your family?					
34. How willing would you be to vote for a politician if you knew they had suffered a mental illness?					
35. How willing would you be to employ someone if you knew they had a mental illness?					

Scoring

Total score is produced by summing all items (see reverse scored items below). Questions

with a 4-point scale are rated 1- very unlikely/unhelpful, 4 – very likely/helpful and for 5-

point scale 1

– strongly disagree/definitely unwilling, 5 – strongly agree/definitely willing

Reverse scored items: 10, 12, 15, 20-28

Maximum score -
160 Minimum
score -35
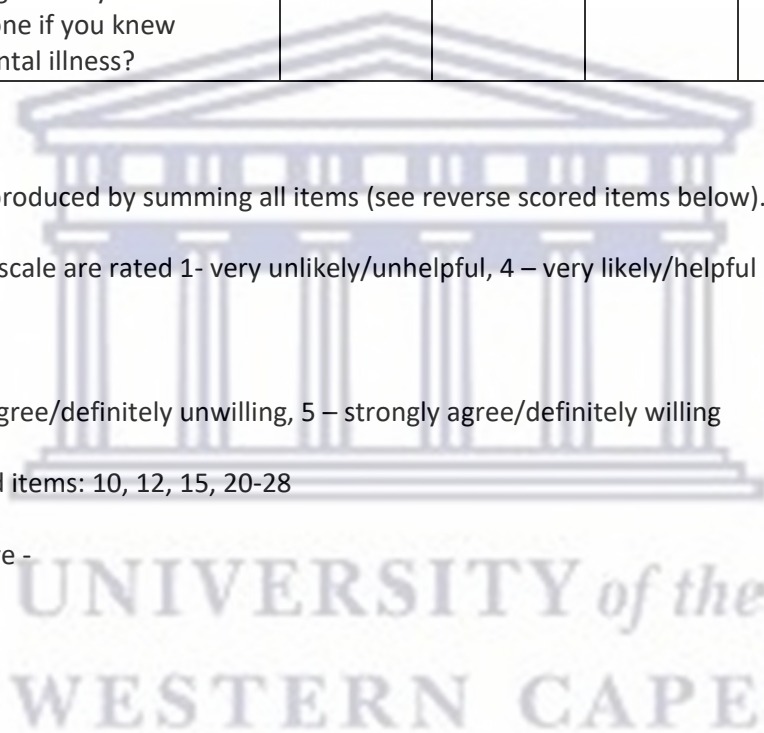
Appendix 21: Proof of validation (Expert 1)

<u>The first expert's comments</u>

INDEPENDENT VALIDATION CERTIFICATE

Protocolvalidation

PhD inNursing

J.J.Musafiri

THIS IS TO CERTIFY THAT

Dr. Beryldene Swartz has co-validated Chapter 8 and 9, the design and development of the

protocol as part of the full dissertation,

DEVELOPMENT OF A PROTOCOL FOR NURSES TO REDUCE STIGMA TOWARDS MENTAL HEALTH

CARE USERS AT PRIMARY HEALTH CARE SERVICES IN THE WESTERN CAPE,

to be submitted.

I declare that the candidate and I have reached consensus on the aspects of the protocol changed,

corrected and/or edited.

Beryldene Swartz

1) 'Based on Corrigan's cognitive stigma model (2000), the behaviour of people with mental disorders serves as a stigma signal that triggers the individual's preconceptions about them, which leads to their attitudes towards them'.

   - Comments on 'their attitudes': Certain attitudes being adopted or leave out their or their (individuals other than those who have mental affliction/disorders).

2) 'The findings from the systematic review indicated that the combination of educational and contact interventions, educational intervention and contact intervention are effective in reducing mental health stigma'.

   - Comments: maybe just re-read this sentence/ maybe it is me who is not understanding...

3) 'To reduce PHC nurses' mental health stigma, they need to attend mental health training…..'

   - Comments on 'they need': maybe it is recommended/suggested or they are to.

4) 'Moreover, PHC nurses need contact with MHCU.'

   - Comments on 'MHCU': MHCU = I take it that is it both the individual and the collective.

5) The indirect contact with MHCU will consist of watching videos on MHCU.

   - Comments on 'MHCU': Is it on the care or on the behaviours exhibited or just aspects related to MHCUs?

6) The managers of PHC facilities should ensure that MHCU are treated in any of consultation offices used by professional nurses

   - Comments on 'any of consultation offices': maybe to say in the offices or clinic rooms of the …… /consultation occurs in the privacy of offices or clinic rooms.

Appendix 22: Proof of validation (Expert 2)

The second expert's comments

Specialist Mental Health Support: Counselling /Psychotherapy

Research consultant

Dr. E. Van Wijk

Dr. Evalo van Wijk   Date: 23/7/2023

Registered with South African Nursing Council: 11984556

Department of Health Practice Number: 9990880001029126

Address

14 Ullswaterstreet,

Pinelands,

7405.

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_____

Re: Protocol validation

Dear Mr. J.J. Musafiri

This is to certify that I validated your protocol included in Chapter 8 and 9 (the design and development of the protocol). I hereby confirm that your protocol was developed following the correct process, and it is appropriate and feasible. I have made comments below that you need to be address.

Your study is about nurses working at primary health care facilities.

You need to make sure that you are consistent throughout your dissertation-otherwise you are going to confuse the reader and examiner –I suggest that you adjust it throughout your dissertation because the focus is on nurses working in primary health settings.

The rationale of this protocol is to demonstrate the guidelines, to reduce mental health stigma among PHC nurses and to ensure that the voice of MHCU is heard.

You wrote 'The experts comprised professional nurses who are mental health nurses, holding at least a diploma in advanced psychiatric nursing'. The questions to address are: 'Where are they working and what will be their position at PH level'?

You wrote 'The experts also comprised district psychiatrists, a medical doctor with a specialty in mental health who are qualified to assess a patient with physical or mental conditions. The district psychiatrists have experience in caring for MHCU at PHC facilities and are aware of mental health
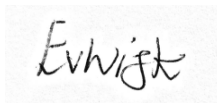
stigma'. My comment is: they are not part of your objectives-as its now-will confuse the reader and examiners'

'Strategies of the protocol'. My comment: You repeat this three times-must it be like that?

You wrote: 'Studies have proved the effectiveness of the existing interventions used to reduce mental health stigma'. My recommendations: Please mention a few, you cannot just say studies without referencing them and are these studies national and international?

Regards,

Dr Van Wijk

Appendix 23: Proof of validation (Expert 3)

<u>The third expert's comments</u>

Western Cape Government
Health and Wellness
FOR **YOU**

Dr T M Bock
Registrar Academia and Research Metro Central
Tel 021 831 5834
Email: Theresa.Bock@westerncape.gov.za
Date: 2023/08/08

Mr Musafiri

FEEDBACK PROTOCOL FOR NURSES TO REDUCE STIGMA TOWARDS MENTAL HEALTH CARE USERS AT PRIMARY HEALTH CARE SERVICES IN THE WESTERN CAPE.

Thank you for the opportunity to read through your work. Your methodology and protocol makes so much sense. The protocol for training follows logically and the input provided by the practitioners will make this an acceptable protocol to follow. The content is really an overall introduction.
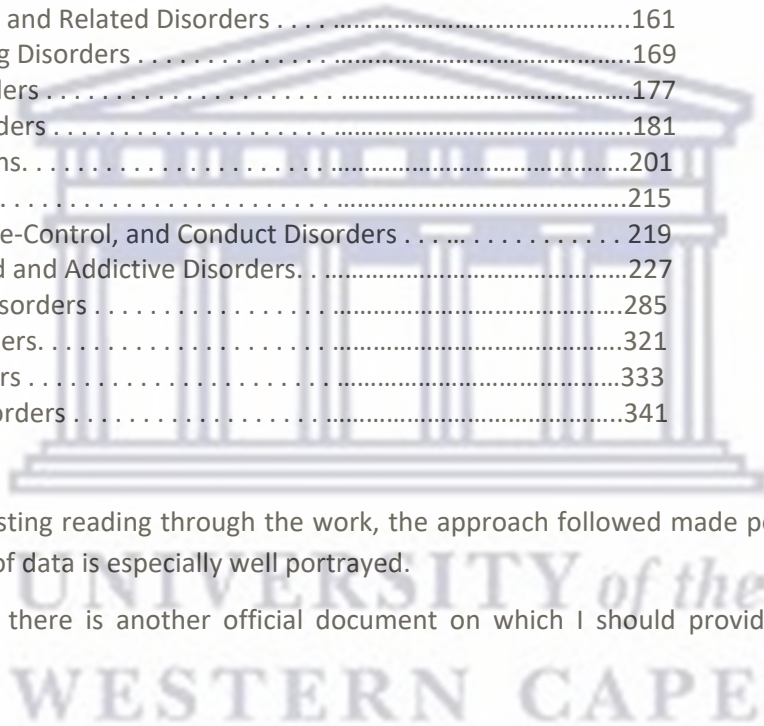
Please see below some additional feedback

Page	Paragraph	Comment
28	**Mental hearth training**	**Correct spacing**
32	**The findings from the systematic review (Phase two) indicate that the combination of educational intervention and contact intervention, educational intervention, and contact intervention were found to be** **effective in reducing health care providers' mental health stigma at the global level.**	**I think this is repetitive**
33	**all nursing categories of PHC nurses'**	**What categories of PHC are there?**

General Feedback

The protocol makes perfect sense and is inclusive of an introduction to all different types of mental health disorders.

When referring to the different types of mental illness I advise that the new terminology should be used as per DSM-5TR (We no longer refer to Mood disorders and Intellectual disability as those words also encourages stigmatization). I am aware that the terminology used is cited from other researcher's work, however in the interest of de-stigmatization I would recommend using current terminology or to at least allude to it in the protocol. Please see copy and paste below of the new categories as per DSM-5.

It was very interesting reading through the work, the approach followed made perfect sense and the triangulation of data is especially well portrayed.

Please indicate if there is another official document on which I should provide the necessary feedback

Thank you.

Dr T M Bock

Registrar Academia and Research

WESTERN CAPE COLLEGE OF NURSING

Appendix 24: Editor's certificate

ENGLISH LANGUAGE GRAMMAR EDIT

This is to certify that the attached titled

Development of a protocol for nurses to reduce stigma towards mental health care users at primary health care services in the Western Cape

prepared and submitted by

JOHN JAMES MUSAFIRI

Student number 2928198

has gone through an English language grammar edit carried out by Duncan Harford.

31/08/2023

DATE

SIGNATURE

Appendix 25: Turnitin receipt

turnitin

Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	JOHN JAMES MUSAFIRI
Assignment title:	TurnitinreportJohn
Submission title:	2928198:John_James_Musafiri_-PhD_Thesis.docx
File name:	a7e5-4efd-9c36-5c8fbb9d5719_John_James_Musafiri_-PhD_T...
File size:	705.84K
Page count:	286
Word count:	66,256
Character count:	376,550
Submission date:	18-Oct-2023 12:45AM (UTC+0200)
Submission ID:	2199045590

Development of a protocol for nurses to reduce stigma towards
mental health care users at primary health care services
in the Western Cape

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WESTERN CAPE

http://etd.uwc.ac.za/