Title: Perceptions of Premarital Sex Risk among Undergraduate Students in South Africa: A Systematic Review

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Abstract

The first year of college is usually regarded as a significant transitional period for young adults, mainly with regard to sex and dating. Premarital sex is being reported by an increasing number of young adults, as well as college undergraduates, increasing by 11.3% in 2000 as compared to 9.8% in 1990. The absence of comprehensive sex education for youth raises the dangers that they will have unsafe sex and the chances that they will engage in premarital sex without being efficiently informed of the likely consequences. The aim of the study is to provide evidence of filtered base information assessed for methodological rigor and coherence on perceptions of premarital sex risk among undergraduate students in South Africa. A three-step assessment strategy was utilized to identify any potential sources of bias. The following databases were searched: Cochrane, EBSCOR host (Eric, Academic Search Complete, Psych Info, Education Search Complete, Psychological and Behavioral Sciences), SAGE, JSTOR, and Science Direct. Articles passed through rigorous selections and evaluation process for inclusion in the final review. The findings shows that most students’ do have positive attitudes towards premarital sex, with males having more liberal attitudes than females (mean score of 2.68 vs. 2.32, p < 0.001). Personal HIV risk perceptions were only stated by 27.76% of the sexually active respondents which is very little. Moreover, majority of the sexually active respondents (89.49%) described their fellows’ sexual behaviours as either risky or very risky. The contributing factors to risky sexual behaviour were peer pressure, alcohol and drug use, low self-esteem and pressure from partner. In conclusion, a high proportion of participants had received sex education at school and their perceptions of the quality of this education is good, but South African first year university students still engage in risky behaviour. Sex education and HIV prevention programs should equip unmarried youth with adequate knowledge on contraception and condom use; intervention programs can start with their attitudes toward sex. Lastly, a multi-strategy approach that targets preventative interventions at the individual, family and peer level to
promote safe sexual behaviours amongst young people in transitioning countries is needed. This study intent to assist parents, students and the South African society by bringing change to the current interventions and the actions of students this in turn will promote abstinence and safe sexual practices.

Keywords: Perceptions, premarital sex risk, fornication, risky sexual behaviours, undergraduate students
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1. INTRODUCTION

1.1 Background

The first year of college is usually regarded as a significant transitional period for young adults, mainly with regard to sex and dating (Gillen & Lefkowitz, 2006; Morgan & Zurbriggen, 2012). Living together and premarital sex as a lifestyle are on the increase all over the world, South Africa included. These are gradually becoming somewhat of a norm amongst students and the working young adults, who not only decide on sharing their accommodations, but also engage in sex (Dolbik-Vorobei, 2005; Murray-Swant, 2005). The perceptions on premarital sex among undergraduate students has transformed over the years. As compared to students of the 1970s and 1980s, more students in Nigeria today are expected to be of the perception that life has less or no importance without sexual relations on campus (Ibrahim, 2003). According to Warner (1973), sex before marriage is perceived as normal and a pleasant experience which young adults get involvement in.

According to Mwaba and Naidoo (2005), half of the participants among a sample of South African university students stated having sex within 12 months of their arrival on campus. Some undesirable consequences of sex outside of marriage include the potential for unplanned pregnancies, spread of sexually transmitted diseases (STIs), disruption of the families and marriages (in cases of adultery), and emotional and psychological problems due to absence of loyalty and commitment to relationships outside of marriage (MWLUSA, 1999). Young adults aged 15-24 account for probably 45% of new Human Immune Virus (HIV) infections globally (UNAIDS, 2008). The surge in HIV/AIDS amongst students is probably due to growing proportions of students engaging in sex, and rather low information of sexual health. Premarital sex is being reported by an increasing number of young adults, as well as college undergraduates, increasing by 11.3% in 2000 as compared to 9.8% in 1990 (Hoy, 2001; Ma et al., 2006; Zhang, Li, Li, & Beck, 1999).

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1.2 Problem Statement

According to Bennett (2007), the absence of comprehensive sex education for youth raises the dangers that they will have unsafe sex and the chances that they will engage in premarital sex without being efficiently informed of the likely consequences. Early sexual activity is known to increase the dangers of pregnancy among youths, maternal and perinatal mortality, and sexually transmitted infections (STIs) which also includes HIV. Campaigns on ending HIV/AIDS have acknowledged premarital sexual conduct as one of the main risky behaviors by youth (Cheluget et al., 2006; Kirungi et al., 2006; Mahomva, Greby et al., 2006; Smith, 2004). It is a known fact that young people are at more risk of getting STDs, mostly HIV/AIDS, than any age groups (Wong et al. 2008). If the problem of undergraduates students perceptions of ignoring the risks of premarital sex persists then their lives are put at risks due to unwanted pregnancies, STD’s and HIV/AIDS and many other risks. One of the core purposes of this systematic review is to synthesise existing literature of perceptions on premarital sex amongst undergraduate students and assesses the methodological rigour of these studies. Since the information that is given by the systematic review is filtered, it is better able to provide more reliable conclusions, therefore a more reliable basis for policy and decision making (Klassen, Jadad, & Moher, 1998).

1.3 Rationale

Although there has been research published on perceptions of premarital sex, a systematic review of this data had not yet been conducted. The rationale for the review therefore, is that it will allow for data gathered to be described and analysed for methodological rigour and integrated into one inclusive document. Organising information into one document will offer filtered information. This will make it easier to highlight the perceptions on premarital sex and the risk factors amongst undergraduate students. The ultimate areas of focus in this area can also be identified whilst inappropriate research can be systematically disregarded. This will also show areas which are lacking in literature. This
study is also necessary in order to identify factors influencing perceptions of premarital sex and the risk factors in the South African context. Because of the sensitivity of this subject, young people get insufficient education, guidance and services on reproductive health (Judith, 1999). The limited knowledge about their bodies and their sexuality expose them to sexually transmitted diseases and infections, including HIV/AIDS, unplanned early childbearing and unsafe abortions (Judith, 1999).

It has become apparent through the literature that this is an under-researched area in the psychology field, particularly in South Africa. Where research has been done, there is a need to assimilate known facts from different fields and geographical locations about perceptions on premarital sex. Another aim is to systematically collect data, and determine the depth of research in this area. Finally, this review aims to break down the barriers concerning research and practice by reporting observations on how research was conducted, and creating recommendations centred on the efficacy of the results (Greenhalgh, 1997). The findings from this research can serve the field of education and the community at large as there is a need for constant and current information regarding perceptions on premarital sex risk among undergraduate students. It will provide insight to help educators, government officials and other organisations to create more effective interventions to curb risks associated with premarital sex. This study aims to assist parents, students and the South African society by bringing change to the current interventions and the actions of students this in turn will promote abstinence and safe sexual practices.
2. LITERATURE REVIEW

The prevalence of risky sexual conduct is high among students in tertiary institutions regardless of a high level of knowledge about reproductive health (RH) matters (Akande, 1994; Omorogie, 2002). Additionally, sexual lifestyles in higher educational institutions in some of African countries, have been recognised as presenting a high level of risky sexual conduct such as transactional sex, engagement with several partners, unprotected casual sex, and gender-based violence (Omorogie, 2002; Kelly, 2001; Katjavivi, & Otaala, 2003). Moreover, Fatusi (2004) states that socially, the usual university environment in Nigeria offers chances for high level of sexual interaction, and the independence that characterizes the higher institutions allows permissive lifestyle. Established on the depiction of the sexual behaviour within the university grounds, African institutions of higher learning have been referred to as high-risk institutions for the transmission of HIV (Katjavivi, & Otaala, 2003).

2.1 Perceptions of Premarital Sex among Undergraduate Students

According to Chara and Kuennen (1994), university students are more tolerant of casual sex and experience less sex-related guilt than their younger counterparts. Numerous university students report sufficient knowledge about STIs; nonetheless, a lot of them do not feel they are at personal risk (Lance, 2001).

2.2 Factors that influence perceptions of premarital sex among undergraduate students

Some of the risk factors for engaging in unsafe sexual activities among the college students are use of alcohol partner characteristics such as steady versus non-steady partner, and substance abuse (So, Wong, & Deleon, 2005; Brown & Vanable, 2007). As the results of numerous studies have revealed, the social environment plays a significant role in the health-related behaviour of young people, and this consist of their friends and peers, sexual partners, family members as well as the community, school and other youth-serving institutions (WHO, 1999). In a latest study that looked at the causes of HIV/AIDS related risky behaviors among youths, lower self-esteem and emotional distress considerably predicted unprotected sex and
multiple partners (Ethier, Kershaw, Lewis, Milan, Niccolai, & Ickovics, 2006). Another recent study which looked at predictors of HIV/AIDS risk among university students, indicated gender to be the strongest predictor of condom use and race to be the strongest predictor of number of sexual companions (Dilorio, Dudley, & Soet, 2007). Other researchers has also found that religious view plays a key role for many individuals with concerning sexuality. Research proposes that different aspects of religiosity have unrelated effects on sexual attitudes, risk perception and sexual conduct (Hollander, 2003; Miller & Gur, 2002).

2.3 Perceived risk factors associated with premarital sex

Studies conducted on Nigerian university have revealed that a great fraction of undergraduates considered themselves as not being at risk of HIV/AIDS (Akande, 1994; Fatusi, 2004), an on-going rise in self-perception of risk has been experienced. In comparison, to a study done by Akande (1994), that stated that only 40 percent of university students considered their group as being at risk for HIV, a study by Omoregie (2002) documented that 52 percent of undergraduate students were of the perception that they were at greater risk of contracting HIV in relation to the general population. Concerns about the effects of this conduct have led to cumulative intervention for those in the early phase of adolescent life, mostly in-school adolescents. Nonetheless, very limited responsiveness has so far been given to young adults in the age range of late adolescents and youths. According to the World Health Organisation (1995), adolescents from the age of 10 to 19 years; youths are defined as belonging to the age group of 15 to 24 years, while the term young people covers the age of 10 to 24 years (WHO, 1995). Young people in institutions of higher learning, who are typically from the age of 18 to 25 years, have for the most part been neglected in regard to reproductive health programmes. One reason that may give an explanation for this relative neglect of young people in the older age bracket and tertiary institutions is a notion that members of these latter groups are grown enough to take care of themselves (Okonkwo, Fatusi, & Ilika, 2005).
Macphail and Campbell (2001) stated that young people have continued to take part in high risk sex in spite of their knowledge of HIV/AIDS and how to prevent it. This finding collaborates the one by Hawking et al (2001) who revealed that undergraduate students in Nigeria are well-informed about HIV/AIDS transmission and symptoms; however such knowledge did not inhibit them from engaging in unprotected sexual interaction. According to World Health Organization (2006), there is a need of additional research classifying determinants specific to young population at risk due to behaviors they embrace or rather forced to embrace due to social, economic or cultural factors. This study is relevant as it also looks at factors that influence perceptions of premarital sex among undergraduate students.
3. RESEARCH METHODOLOGY

3.1 Aim and Objectives of the study

3.1.1 Aim of the study

The aim of the study is to provide evidence of filtered base information assessed for methodological rigor and coherence on perceptions of premarital sex risk among undergraduate students.

3.1.2 The objectives of the study are to:

- Investigate perceptions of premarital sex among undergraduate students.
- Establish factors that influence perceptions of premarital sex among undergraduate students.
-Ascertain perceived risk factors associated with premarital sex.
- Critically examine methodological quality of studies on perceptions of premarital sex risk among undergraduate students and draw conclusions about the current state of research in this area.

3.1.3 Review Questions

This review aimed to primarily answer the questions:

i. What are the perceptions of premarital sex among undergraduate students?

ii. What are the factors that influence perceptions of premarital sex among undergraduate students?

iii. What are perceived risk factors associated with premarital sex?

iv. Based on the strength of the methodology of the studies, what conclusions can be drawn about the current state of research in this area?

3.2 Operational steps undertaken were to:

- Identify appropriate literature for inclusion.
- Evaluate the literature for methodological quality.
- Provide a meta-synthesis of the findings of included studies.
3.3 Methodological Framework

3.3.1 Research Design

Research designs are processes for collecting, analyzing, interpreting and reporting on the data in research studies (Creswell & Clark, 2007). Research design again guides the methods and decisions that researchers must make during their studies and set the logic by which they make interpretations at the end of the studies (Creswell & Clark, 2007). The current study will use a systematic review approach to find perceptions of premarital sex risk among undergraduate students. A systematic review is defined as a scientific approach used to identify, critically evaluate and synthesis the results of all high-quality studies published on a given subject, so that research evidence that has been assessed as reliable is obtainable in an understandable form (Korhonen et al., 2010). This design is suitable for the current study aim as it offers an evidence base of filtered information assessed for methodological rigor and coherence thus addressing the gaps recognized in the literature review. Systematic and explicit methods were utilized to collect and analyze data aimed at reducing bias in order to create more reliable findings that can be used to inform decision making (Antman et al., 1992; Oxman & Guyatt, 1993).

3.4 Inclusion Criteria

Studies were eligible for inclusion if they:

i. Reported on perceptions of premarital sex risk among undergraduate students.

ii. Were full text and written in English to enable the classification of perceptions on premarital sex risk.

iii. Were quantitative studies.

v. Included undergraduate students
3.5 Exclusion Criteria

Studies were excluded in the study if they:

i. Were not published within the selected time period

ii. Were written in a foreign language, and not found in one of the listed databases or in reference lists of related articles.

iii. Do not report on perceptions of premarital sex risks among undergraduate students.

iv. Do not meet the criteria for the objectives of the review.

3.6 Retrieval Strategy

A search using all available library databases at the University of the Western Cape was conducted to find eligible articles. The following databases were searched: Cochrane, EBSCOR host (Eric, Academic Search Complete, Psych Info, Education Search Complete, Psychological and Behavioral Sciences), SAGE, JSTOR, and Science Direct. A comprehensive search was done across Psychology, Health, Education and Social Sciences. The initial keywords used in the three step retrieval strategy were: Perceptions, premarital sex risk, fornication, risky sexual behaviours, and undergraduate students. The reference list of all identified publications was searched for additional studies.

3.7 Assessment Strategy

A three- step assessment strategy was utilized to identify any potential sources of bias: title reading, abstract reading and full- text reading in finding the appropriate literature for inclusion in the review.

**Title reading.** The title stage was used to select articles for inclusion based exclusively on the relevance of the title by two reviewers. The articles selected as appropriate for inclusion were then assessed at the abstract reading stage.

**Abstract Reading.** The articles selected at the title stage were then assessed at the abstract reading stage. At this stage articles were assessed for relevance by reading through

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the abstracts based on the inclusion and exclusion criteria by two reviewers working separately and then coming together to compare studies for inclusion.

**Full text reading.** The abstracts meeting the inclusion criteria at the abstract stage were deliberated for full text reading. In this stage, two reviewers assessed the selected articles using a quality assessment tool.

**3.7 Methodological Quality appraisal**
The methodological quality of the studies included in the review was assessed using a methodological quality appraisal tool which was developed by Smith, Franciscus and Swartbooi (under review).

**3.8 Method of Review**
A pair of reviewers worked at every stage as a way of reducing bias, and recorded relevant information. Quantitative papers selected for retrieval were assessed by a pair of reviewers for methodological validity prior to inclusion in the review using the five stage process proposed by Khan (2003) and Hemingway (2009). These five stages are; framing the question, searching the literature, assessing the articles across three levels namely title, abstract, and full text (by means of The Quality Assessment Tool), data synthesis, and interpretation of the results. Disagreements between reviewers were resolved through discussion. Any difference which cannot be resolved between the reviewers was settled by the supervisor.

**3.9 Instruments**
Four instruments were used to ensure that all appropriate data is collected, allowing for accuracy of data to be checked as well as serve as a record of the data collected.

**Title Reading and Extraction Tool (Appendix A).** This tool was used to select journal articles for inclusion based on the relevance the title. The tool records information such as name of the author(s), date of the study, the title and source of the study, name of the database in which the study was extracted, the location in which it is stored.
Abstract Reading Extraction Tool (Appendix B). Abstracts were assessed for relevance based on the inclusion criteria. The tool was used to record a summary of information entailing the type of design, population, the instruments, study aims and the quality/results of the study analysis.

The Quality Assessment Tool (QAT) – (Appendix C). This was developed by Smith, Franciscus, and Swartbooi (under review) and assesses aspects of the methodologies used and awards scores on a Likert-type scale. The tool was used to assess the quality of the selected journals for methodological quality in critically appraising literature of primary studies using rating scales. Each full text article obtained a score that was used to determine overall quality of the article reviewed. These scores are categorized as weak (<40%), moderate (41-60%), strong (61-80%), or excellent (81-100%). The minimum threshold score needed for inclusion was “strong”. This was to make sure that an adequate amount of articles were included in the review.

The synthesis tool (Appendix D). The tool has four main sections, “General Description”, “Programme / Intervention content”, “Methodological Appraisal” and “Results and Conclusion”. Under each main heading is a relevant sub-heading. A summary of data was done by using a self-constructed data extraction synthesis tool that is based on the objectives of the study and the different levels of the analysis. Only two sections, Methodological Appraisal and Results and Conclusions were used.

3.10 Analysis

A meta-synthesis is bringing together and breaking down findings, examining them, discovering essential features and, in some way combining phenomena into a transformed whole (Schreiber et al., 1997, p.314). The goal of meta-synthesis is to produce a new and integrative interpretation of findings that is more substantive than those resulting from individual investigations (Finfgeld, 2003). Sandelowski, Docherty, and Emden (1997) identified three contemporary types of meta-synthesis used for systematic review; theory
building which brings together findings on a theoretical level to build a tentative theory; theory explanation which is a way of reconceptualising the original phenomenon; and descriptive meta-synthesis which aims to provide a broad description of the research phenomenon. There are various approaches to conducting a meta-synthesis (Walsh & Downe, 2005), for the purpose of this review, a descriptive meta-synthesis was used. The process of synthesis began with reviewing the literature by ranking studies based on the breadth of the information on the perceptions of premarital sex risk. Furthermore classification of studies was ranked according to the methodological rigor measured by the quality appraisal tool.

3.11 Ethical Considerations

A permission to conduct the study was obtained from the University of the Western Cape Research and Ethics Committee; I am currently a fully registered student with the university. As this is a systematic review, it is regarded as a non-reactive form of research meaning it does not implicate researcher-participant interaction. Ethical guidelines such as confidentiality, informed consent, avoiding harm to individuals does not apply. Plagiarism was avoided by acknowledging other peoples work and as systematic review entails working with paired reviewers, collaboration was taken into consideration.
4. RESULTS & DISCUSSION

4.1 Results of the Search Process

There were records 7617 identified at the beginning of the review. This number changed to 115 after all duplicates were removed. There were 115 articles that were included during the title search and proceeded to the abstract search. During the abstract search, 7 articles were excluded. The reasons for exclusion during this stage were studies which were qualitative or were secondary studies. Of the 39 articles that underwent full text analysis 31 were excluded. Common reasons for exclusion included wrong target group and focus. 8 articles acquired an acceptable threshold score of < 70% (strong) during the full text analysis and these articles were used to compose the systematic review. A diagram detailing the search/screening process can be found in Figure 1 below:
Figure 1. Diagram of review process

**OPERATIONAL STEPS**

Potential records identified through database search
- EBSCOR (n= 2747)
- SA ePublications (n= 2061)
- Cochrane (n= 99)
- Science Direct (n=1809)
- SAGE (n= 574)
- JSTOR (n= 327)

**TOTAL RECORDS IDENTIFIED (n= 7617)**

Records after screening title and duplicates removed (n=157)

Records excluded (n= 7460)

Records screened by abstract (n= 47)

Records excluded (n= 27)

Full text articles assessed using critical appraisal tool (n= 22)

Records excluded (n= 14)

**FULL TEXT ARTICLES INCLUDED FOR SUMMATION WITH DATA EXTRACTION TOOL (N= 8)**

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4.2 General descriptions of the articles

The final articles included in this review were from research dating from 2006 to 2016. In the databases searched, there was a few of significant research from 2008 to 2011 although this time frame was included in the study. Based on the critical appraisal tool all the 8 articles were rated strong (100% overall). Table 1 below captures the included articles and their threshold scores.

Table 1

Included article’s and their Threshold scores

<table>
<thead>
<tr>
<th>Article</th>
<th>Title</th>
<th>Threshold Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nkomazana et al. (2014)</td>
<td>Perception of risk of HIV infections and sexual behaviour of the sexually active university-students in Zimbabwe.</td>
<td>78%</td>
</tr>
<tr>
<td>Sychareun et al. (2013)</td>
<td>Predictors of premarital sexual activity among unmarried youth in Vientiane, Lao PDR: The role of parent–youth interactions and peer influence.</td>
<td>76%</td>
</tr>
<tr>
<td>Lewis et al. (2007)</td>
<td>Gender-specific Normative Misperceptions of Risky Sexual Behavior and Alcohol-related Risky Sexual Behavior.</td>
<td>76%</td>
</tr>
<tr>
<td>Mutha et al. (2014)</td>
<td>A Knowledge, Attitudes and Practices Survey regarding Sex, Contraception and Sexually Transmitted Diseases among Commerce College Students in Mumbai.</td>
<td>74%</td>
</tr>
<tr>
<td>Born et al. (2015)</td>
<td>Risky sexual behaviour of university students: Perceptions and the effect of a sex education tool.</td>
<td>72%</td>
</tr>
<tr>
<td>Yip et al. (2013)</td>
<td>Sex knowledge, attitudes, and high-risk sexual behaviors among unmarried youth in Hong Kong.</td>
<td>72%</td>
</tr>
<tr>
<td>Melamed et al. (2012)</td>
<td>HIV knowledge and risky sexual behavior of Young adults in Johannesburg</td>
<td>70%</td>
</tr>
</tbody>
</table>

*article’s >70% included & ratings in descending order*
The following section gives more comprehensive descriptions of the aims, methodologies, geographical locations, target groups, and types of studies identified in this systematic review.

4.3 Studies Aims and Objectives

In 87.5% of the included studies, the aims were related to investigating the risky sexual behaviour and perceptions among students/youth (Nkomazana et al., 2014; Lewis et al., 2007; Mutha et al., 2014; Born et al., 2015; Kibombo et al., 2007; Yip et al., 2013 & Melamed et al., 2012), this was the main investigated factors. In 37.5% of the studies the focus was on sexual/HIV knowledge among youth (Mutha et al., 2014; Yip et al., 2013 & Melamed et al., 2012), the last 25% investigated factors associated with premarital sexual behaviours which included individual, family and peer level factors (Sychareun et al., 2013 & Mutha et al., 2014).

4.4 Methodologies employed in the studies

The studies used 2 main design types. These were cross sectional (Nkomazana et al., 2014; Sychareun et al., 2013; Lewis et al., 2007; Mutha et al., 2014; Kibombo et al., 2007; Yip et al., 2013 & Melamed et al., 2012) and mixed method pilot study (Born et al., 2015). All studies were quantitative in nature. The analyses used were dependent on the instruments used and the outcomes being investigated. The following are data analysis methods which were used:

i. Chi square test (Nkomazana et al., 2014)

ii. Bivariate associations, chi-square or Fisher’s exact test or t-test, Multivariate analyses, initial bivariate analyses (Sychareun et al., 2013)

iii. Univariate tests and, a repeated measures multivariate analysis of covariance (MANCOVA), Hierarchical multiple regression analyses (Lewis et al., 2007)

iv. Descriptive statistical analysis, Chi-square tests, t-tests (Mutha et al., 2014)
v. Descriptive Statistics (Born et al., 2015)

vi. Logistic regression, Descriptive Analysis, Multivariate Logistic Regression (Kibombo et al., 2007)

vii. Descriptive Statistics, Chi-square tests, t-tests, Multivariate logistic regressions, Bivariate comparisons and Multivariate analyses (Yip et al., 2013)

viii. Summary statistics, non-parametric t-tests (Melamed et al., 2012)

*These methods of analysis are captured in the data extraction tool (See appendix D).

4.5 Geographical location

Of all the studies that were included, 50% originated from Africa, Zimbabwe, South Africa and Uganda (Nkomazana et al., 2014; Born et al., 2015; Melamed et al., 2012 & Kibombo et al., 2007). Asia, specifically Lao PDR, India and China accounted for 37.5% (Sychareun et al., 2013; Mutha et al., 2014 & Yip et al., 2013) while the remaining 12.5% was from North America, United States of America (Lewis et al., 2007). South America, Australia and Antarctica were not represented in the literature. However, there are no permanent residents who inhabit Antarctica therefore exclusion of this continent is insignificant.

4.6 Target group

Even though all the articles included university students/ youth perceptions/attitudes and risky sexual behaviours, the target group differed in terms of age and marital status. The following are the target groups as outlined in the studies:

i. University students (Nkomazana et al., 2014)

ii. Unmarried youth aged 18 to 24 years (Sychareun et al., 2013)

iii. First year undergraduate students (Lewis et al., 2007)

iv. College students (Mutha et al., 2014)

v. First-year University students (Born et al., 2015)

vi. Adolescents in Uganda aged 12-19-year old (Kibombo et al., 2007)
vii. Unmarried youth aged 18 to 27 years (Yip et al., 2013)

viii. High school students, First year university students (Melamed et al., 2012)

4.7 Types of studies

The studies used were all quantitative in nature except one which is mixed method. Thus 87.5% of the studies used cross sectional design (Nkomazana et al., 2014; Sychareun et al., 2013; Lewis et al., 2007; Mutha et al., 2014; Kibombo et al., 2007; Yip et al., 2013 & Melamed et al., 2012) and 12.5% was a mixed method pilot study (Born et al., 2015).

4.8 Empirical evidence/Results

4.8.1 Perceptions towards Premarital Sex

According to the findings by Sychareun et al. (2013) most respondents’ do have positive attitudes towards premarital sex, with males having more liberal attitudes than females (mean score of 2.68 vs. 2.32, p < 0.001). Additionally, many unmarried youth (63.8%) held liberal attitudes toward premarital sex and about half held liberal attitudes concerning any form of sexual activity and premarital pregnancy in Hong Kong (Yip et al., 2013). Nearly 60% held conservative attitudes toward causal sex relationships and multiple sex partners (Yip et al., 2013).

4.8.2 Risk Perception from Own Sexual Behaviour

In a study conducted by Nkomazana et al. (2014), personal HIV risk perceptions were only stated by 27.76% of the sexually active respondents which is very little. These results further showed that about a third of the respondents (32.43%) felt that their own sexual behaviours were putting them at risk of contracting HIV. However, it was not evident why they still participated in activities that exposed them to HIV risk, given that they were fully aware of the risk posed by their actions. About 41.14% of the respondents believed that their own behaviours were harmless and did not put them at risk of HIV infections (Nkomazana et al., 2014). Moreover, more males (39.70%) than females (21.64%), agreed that their own behaviours put them at the risk of acquiring HIV. Another study by (Melamed et al., 2012) found
that 55% of sexually active individuals reported using condoms all times while only 3% reported never using a condom. The result shows that few participants fear HIV infection. This maybe relates to HIV risk perception and the fact that many individuals do not view themselves at risk (Melamed et al., 2012).

4.8.3 Risk Perceptions on other Students

Majority of the sexually active respondents (89.49%) described their fellows’ sexual behaviours as either risky or very risky (Nkomazana et al., 2014). Furthermore, of all the respondents, only a tenth (10.51%) felt that their fellows’ sexual behaviours were either safe or very safe. More female respondents (90.08%) reported that their colleagues’ sexual behaviours were at least risky compared to male respondents (89.08%), the difference in HIV risk perceptions of students about their fellows’ sexual behaviours across gender was statistically insignificant showing a chi square statistic of 4.86 (P .18) (Nkomazana et al., 2014). Another finding by Lewis et al. (2007) showed a main effect for perceived and personal behavior, such that men and women perceived others as engaging in more risky sexual behavior than they really did, Wilks’ Λ=.69, F (6, 586)=44.57, p<.001, h2p =.31.

4.8.4 Factors that Influence Perceptions of Premarital Sex

Sychareun et al. (2013) found that predictors of premarital sex for males were age, sexual attitudes, perceived parental expectations regarding sex, dating and peer influence. For females, predictors were father’s level of education, parent-youth sexual communication, peer influence and liberal sexual attitudes. Furthermore, another study found that the contributing factors to risky sexual behaviour were peer pressure, alcohol and drug use, low self-esteem and pressure from partners (Born et al., 2015). In a study conducted by Lewis et al. (2007) repeated measures results did not vary by gender for alcohol-related risky sexual behavior, F (2, 1,182) =1.18, p=ns, h2p=.002.
4.8.5 Perceived Risk Factors Associated with Premarital Sex

Results show that above a quarter of the respondents felt at risk of getting HIV due to their steady partners’ sexual behaviours and more than half felt at risk of getting HIV due to their casual partners’ sexual behaviours (Nkomazana et al., 2014). Additionally, a third of the respondents admitted to HIV risk due to their own sexual behaviours. The results from a study conducted in Zimbabwe revealed that state university respondents felt exposed to HIV infections due to own sexual behaviours than their private university counterparts (Nkomazana et al., 2014). Many sexually active respondents (71.38%) revealed that their likelihoods of contracting HIV were either low (53.77%) or not there at all (17.61%). Only 28.62% of them felt that their chances of contracting HIV were either medium (21.70%) or high (6.92%); this shows that respondents has very low personal HIV risk perception.

Regarding self-perceived risk to HIV and worries about contracting HIV in Uganda, majority of adolescents especially females across all age groups are concerned about the risk of getting infected with HIV (Kibombo et al., 2007). On average, 72% of the females compared to 55% of the males expressed this opinion (Kibombo et al., 2007).

The findings by Yip et al. (2013) indicated that being older, coming from a divorced family, out of school status and liberal attitudes toward risky sex behavior were more likely to engage in premarital sex or high-risk sex behaviors, and being female, being better educated and being immigrants were less likely to engage in premarital sex. However, immigrants were more likely to engage in casual relationship and to have multiple partners (Yip et al., 2013). In addition, just over 60% of the sexually active participants did not perceive themselves to be at risk for getting HIV (Yip et al., 2013).

4.8.6 Sex Knowledge and Premarital Sex Risk

The findings by Mutha et al. (2014) shows that the total sex related knowledge scores of males and females were $8.2 \pm 1.2$ and $6.2 \pm 2.4$ ($p < 0.0001$), respectively. Additionally, most participants (42%) had received their sex education from school as opposed to TV.
(24%), home (16%), friends (12%), community facilities (3%) and other (3%). About 73% of participants regarded the quality of the sex education received at school as good; knowledge regarding different forms of sex was poor with 59% (females 61%, males 55%) reporting that sex was only vaginal (not oral, anal or masturbation) (Born et al., 2015). In a study conducted by Melamed et al. (2012) to compare the HIV knowledge scores between those who are sexually active and those who are not sexually active, a non-significant result was found (H= 0.3303; p= 0.3259). As a result, there is inadequate evidence to suggest that there is a difference in HIV knowledge among sexually active and not sexually active individuals (Melamed et al., 2012).

The results which emerged from the studies showed a pattern of significant themes highlighting perceptions towards premarital sex, risk perception from own sexual behaviour, risk perceptions on other students, factors that influence perceptions of premarital sex, perceived risk factors associated with premarital sex, sex knowledge and premarital sex risk. Table 2 below captures the findings from these studies according to their specific areas of focus.
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<tr>
<th>Study</th>
<th>Design</th>
<th>No. of Subjects</th>
<th>Geographical Location</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
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<td>Nkomazana et al.</td>
<td>Quantitative cross-sectional</td>
<td>( n=345 )</td>
<td>Zimbabwe</td>
<td>Personal HIV risk perceptions were low, reported by 27.76% of the sexually active respondents. Almost all respondents described their fellows’ sexual behaviours as either risky or very risky.</td>
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<td>(2014)</td>
<td>study</td>
<td></td>
<td></td>
<td>Most respondents held positive attitudes towards premarital sex, with males having more liberal attitudes than females (mean score of 2.68 vs. 2.32, ( p &lt; 0.001 )).</td>
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<tr>
<td>Sychareun et al.</td>
<td>Quantitative cross-sectional</td>
<td>( n=1200 )</td>
<td>Vientiane, Lao PDR</td>
<td>Findings demonstrated that students perceived that others engaged in more risky sexual behavior than they do and that perceived norms were positively associated with one’s own behavior.</td>
</tr>
<tr>
<td>(2013)</td>
<td>study</td>
<td></td>
<td></td>
<td>The total sex related knowledge scores of males and females were 8.2±1.2 and 6.2±2.4 (( p=0.0001 )), respectively. 84% males and 72% females disagree that virginity should be preserved till marriage.</td>
</tr>
<tr>
<td>Lewis et al.</td>
<td>Longitudinal Study</td>
<td>( n=687 )</td>
<td>USA</td>
<td>The participants reported that the sex education intervention tool influenced their risky sexual behaviour positively.</td>
</tr>
<tr>
<td>(2007)</td>
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<td></td>
<td>There is a highly significant positive association between perceived risk and risky sexual behavior among males but not females.</td>
</tr>
<tr>
<td>Mutha et al.</td>
<td>Cross-sectional study</td>
<td>( n=500 )</td>
<td>Mumbai, India</td>
<td>Results indicated that being older, coming from a divorced family and liberal attitudes toward risky sex behavior were more likely to engage in premarital sex or high-risk sex behaviors.</td>
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<tr>
<td>(2014)</td>
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<td>Over 60% of the sexually active participants did not perceive themselves to be at risk for acquiring HIV.</td>
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</table>
5. DISCUSSION

The aim of the study was to provide evidence of filtered base information assessed for methodological rigor and coherence on perceptions of premarital sex risk among undergraduate students. The following section is the discussion of significant themes emerging from the literature. These include perceptions towards premarital sex, risk perception from own sexual behaviour, risk perceptions on other students, factors that influence perceptions of premarital sex, perceived risk factors associated with premarital sex, sex knowledge and premarital sex risk.

The findings from the included articles agree that students tend to consider themselves not at risk due to premarital sex even when they have sufficient information. A study done in South Africa, found that the level of sex education knowledge amongst the participants was unsatisfactory and of a poor quality which may be a result of poor preparation at school (Born et al., 2015). However, unmarried youth in Hong Kong had satisfactory sex knowledge, but they lacked contraceptive knowledge (Yip et al., 2013). The findings by another Asian study found that the total sex related knowledge scores of males and females were 8.2±1.2 and 6.2±2.4 (p<0.0001), respectively. 84% males and 72% females disagree that virginity should be conserved till marriage (Mutha et al., 2014). These studies are supported by literature, according to Lance (2001) numerous university students reports sufficient knowledge about STIs; nonetheless, a lot of them do not feel they are at personal risk.

The themes that emerged under perceptions of premarital sex are risk perception from own sexual behaviour and risk perceptions on other students. The studies indicated that the participants find their risk perception to be caused by their own sexual behaviour (Lewis et al., 2007; Kibombo et al., 2007). Perceived norms were also positively linked with one’s own behavior (Lewis et al., 2007). The findings from the studies shows that males tend to have more liberal attitudes towards premarital sex as compared to females (Sychareun et al., 2013; & Yip et al., 2013). Most respondents held positive attitudes towards premarital sex, with
males having more liberal attitudes compared to females (mean score of 2.68 vs. 2.32, p < 0.001) (Sychareun et al., 2013). Many unmarried youth (63.8%) held liberal attitudes toward premarital sex and about half held liberal attitudes toward any form of sexual activity and premarital pregnancy (Yip et al., 2013). About 60% held conservative attitudes toward causal sex relationships and multiple sex partners; males have a tendency of holding a more liberal attitude toward high-risk sex behaviors than females (Yip et al., 2013). The study by Kibombo et al. (2007) shows that there is a very significant positive association between perceived risk and risky sexual behavior among males but not females. The findings reveal that, irrespective of their current sexual behavior, most female adolescents in Uganda feel at great risk of HIV infection (Kibombo et al., 2007). On the theme of risk perceptions on other students, studies from Zimbabwe and the United States of America showed similar findings (Nkomazana et al., 2014; Lewis et al., 2007). Nearly all respondents described their partners’ sexual behaviours as either risky or very risky (Nkomazana et al., 2014) students perceived that others engaged in more risky sexual behavior than they do (Lewis et al., 2007).

The studies indicated that being older, coming from a divorced family, out of school status and liberal attitudes toward risky sex behavior (Sychareun et al., 2013; Yip et al., 2013) were highly expected to engage in premarital sex or high-risk sex behaviors, and being female, being better educated and being immigrants were less likely to engage in premarital sex (Yip et al., 2013). Moreover, the studies shows a difference in predictors of premarital sex between males and females, for males the predictors were age, sexual attitudes, perceived parental expectations regarding sex, dating and peer influence; females predictors were father’s level of education, parent-youth sexual communication, peer influence and liberal sexual attitudes (Sychareun et al., 2013). The studies are supported by the literature that shows that the social environment plays an important role in the health-related behaviour of young people, and this involves their friends and peers, sexual partners, family members as well as the community, school and other youth-serving institutions (WHO, 1999).
Omoregie (2002) documented that 52 percent of undergraduate students were of the perception that they were at greater risk of contracting HIV in relation to the general population; this literature supports the studies found. In Zimbabwe, personal HIV risk perceptions were low, reported by 27.76% of the sexually active respondents (Nkomazana et al., 2014). This is similar to the findings in South Africa, above 60% of the sexually active participants did not perceive themselves to be at risk of getting HIV (Melamed et al., 2012). Moreover, the studies show that above a quarter of the respondents felt at risk of getting HIV due to their steady partners’ sexual behaviours and more than half felt at risk of getting HIV due to their casual partners’ sexual behaviours (Nkomazana et al., 2014).

A third of the respondents agreed to HIV risk due to their own sexual behaviours, also the participants were in agreement on the contributing factors to risky sexual behaviour being peer pressure alcohol and drug use, low self-esteem and pressure from partners (Born et al., 2015 & Nkomazana et al., 2014). The findings also show that adolescents with broken marriages are much more vulnerable to high risk sexual behaviors than other categories of adolescents (Kibombo et al., 2007). Furthermore, many state university respondents felt exposed to HIV infections due to own sexual behaviours than their private university equivalents (Nkomazana et al., 2014). From these studies, HIV appears to be common as compared to other risks such as unplanned pregnancies, spread of sexually transmitted diseases (STIs), disruption of the families and marriages (in cases of adultery), and emotional and psychological problems but the contributing factors appears to be similar across studies from different locations.
6. CONCLUSION & RECOMMENDATIONS

This systematic review highlighted what is known in research about perceptions on premarital sex risk and the factors that influence premarital sex and perceived risk factors. In spite of a high proportion of the participants having received sex education at school and the perceptions of the quality of this education being good, South Africa first year university students still engaged in risky behaviour (Born et al., 2015). The studies also indicated that students perceived that same-sex and opposite-sex peers engaged in more risky sexual behavior than they do and that same-sex perceptions were associated with one’s behavior (Lewis et al., 2007; Kibombo et al., 2007). In Uganda, even though most adolescents perceive themselves to be at great risk of getting infected with HIV, this perception is much stronger among females irrespective of their present sexual behavior (Kibombo et al., 2007).

Both male and female youth with broken marriages are much more likely to engage in risky sexual behaviors than other youth (Kibombo et al., 2007). This increased vulnerability needs to be documented at family, community and program levels so that such adolescents are given suitable support in terms of information and services. Some cultural practices and rituals presented in parts of Uganda also continue to put adolescents at risk through encouraging risky sexual behaviors (Kibombo et al., 2007). Even though they reported risky sexual behaviours of their fellow students, the majority of university students seemed unaffected by the risk of HIV infections (Nkomazana et al., 2014). The findings of this study draw attention to the low personal HIV risk perceptions of university students in Zimbabwe. HIV does not seem to be the main factor also within South African first-year university students when considering whether one should engage in sexual activity (Melamed et al., 2012).
Most research originated from Africa (50%) and Asia (37.5%). This means that it may still be applicable to South Africa, since the countries are classified as developing and share similar collectivist cultures. These value-laden findings are relevant as they highlight perceptions on premarital in South Africa, Africa and Asia and the rest of the world. This review has made a significant contribution by investigating perceptions of premarital sex among undergraduate students, establishing factors that influence perceptions of premarital sex among undergraduate students, ascertaining perceived risk factors associated with premarital sex and providing filtered information.

There are several recommendations that can be made based on this research. The reported risky sexual behaviour of the first-year students in the studies indicates the importance for their needs and experiences to be considered by the university at the beginning of their studies (Born et al., 2015). Regular exposure to a sex-education tool, open forums where perceptions and concerns may be shared and addressed should be considered by universities (Born et al. 2015). The comprehensive sex education gives youth the tools they need to feel more self-confident in making learned decisions about their sexuality and to develop better relationships, bearing in mind that the first year at university is the first time for many students to be independent and decisions made at this stage influence adulthood (Born et al., 2015; Mutha et al., 2014).

The findings indicate that adequate knowledge of HIV is not the main factor when considering whether one should engage in sexual activity (Melamed et al., 2012). Therefore, future research needs to explore what motivates South African first year university students decision in order to further improve HIV preventative education (Melamed et al., 2012). Sex education and HIV prevention programs should equip unmarried youth with adequate knowledge on contraception and condom use; intervention programs can start with their attitudes toward sex (Yip at al., 2013). There is also a need to design particular interventions and reinforce efforts targeting negative cultural practices in order to make them safer.
(Kibombo et al., 2007). A multi-strategy approach that targets preventative interventions at the individual, family and peer level to promote safe sexual behaviours amongst young people in transitioning countries is required (Sychareun et al., 2013).

6.1 Limitations of the review study

The findings of this review need to be carefully considered in light of the limitations. The review only used quantitative studies and excluded any other type of studies. Although several databases were used, due to time constraints, additional records from reference mining were not checked. This limited the findings and results because it meant that relevant literature which is available from other sources was not included in the final review. Therefore findings cannot be generalised across databases. The 10 year time frame between January 2006 and June 2016 also meant that relevant research done prior to 2006 was excluded from the study, further potentially restricting the outcomes. Although the review was on South African articles, some of this articles did not meet the minimum threshold required thus the inclusion of other articles from around the world which met the requirements. Lastly, the use of English only articles also excluded research published in other languages. However, time constraints of this review and limited translation skills of the reviewers meant that only English articles could be included.
References


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Appendix A:

Title Reading and Extraction Tool

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Appendix B:

Abstract Extraction Tool

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Appendix C: Quality Assessment Tool (QAT)

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1. What is the relationship of the study to the area of the topic reviewed?
   a. Minimal to no relevance (0)
   b. Moderate relevance (1)
   c. Highly relevant (2)

**Total points for this section**

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### Conclusion

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<td>2. Was the conclusion supported by the findings?</td>
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<tr>
<td>3. Were relevant recommendations made based on the findings?</td>
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<td>4. Were limitations identified?</td>
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*Total points for this section*

<table>
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<tr>
<th>Total score/Score (%):</th>
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<td>Weak (&lt;40%)</td>
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<tr>
<td>Strong (61-80%)</td>
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<tr>
<td>Moderate (41-60%)</td>
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<tr>
<td>Excellent (&gt;80%)</td>
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(Studies will be excluded from the systematic review if the quality of evidence was rated as weak (<50%) and if the combatting of health risk behaviour was not used as an outcome of the intervention.)

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<th>Overall Appraisal:</th>
<th>Include</th>
<th>Exclude</th>
<th>Seek further info</th>
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Appendix D

The Synthesis Tool

<table>
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<tr>
<th>Methodological appraisal</th>
<th>Results and conclusions</th>
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</thead>
<tbody>
<tr>
<td>Authors</td>
<td>Study aims</td>
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<tr>
<td>Design</td>
<td>Participants</td>
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<td>Sample type</td>
<td>Sample size</td>
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<tr>
<td>Outcome measures</td>
<td>Data analysis</td>
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<tr>
<td>Empirical evidence/results</td>
<td>Conclusions</td>
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</table>

Authors

Study aims

Design

Participants

Sample type

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Outcome measures

Data analysis

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Conclusions

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

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FACULTY OF COMMUNITY HEALTH SCIENCES

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Name: ........................................

Student number: ....................

Module: ........................................

Lecturer: ........................................

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2. I know that plagiarism is a punishable offence because it constitutes theft.

3. I understand the plagiarism policy of the Faculty of Community Health Sciences of the University of the Western Cape.

4. I know what the consequences will be if I plagiarise in any of the assignments for my course.

5. I declare therefore that all work presented by me for every aspect of my course, will be my own, and where I have made use of another’s work, I will attribute the source in the correct way.

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Signature                             Date