The role of the Health Policy Research Group at the College of Medicine, University of Nigeria in building collective capacity for the field of HPSR in Enugu State of Nigeria

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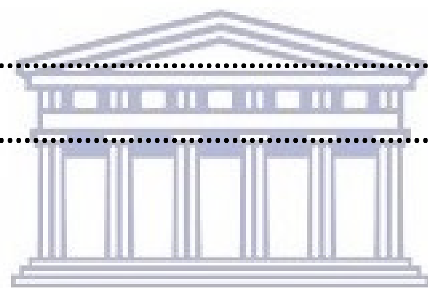

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ABSTRACT

Background: Health policy and systems research and analysis (HPSR&A) is central to health systems development as it tries to draw a comprehensive picture of how the health system and broader determinants of health can shape and be shaped by policies. It consists of researchers and practitioners with different levels of knowledge, experience and expertise, and draws upon a blend of disciplines that contribute to better understanding of complex health systems. This diversity of disciplines and competence creates potential risk for lack of clarity and common understanding of HPSR&A, and reflects a need for continuous capacity development at all levels. The Health Policy Research Group (HPRG) of the College of Medicine, University of Nigeria Enugu campus (COMUNEC) has in the past thirteen years undertaken activities that aimed to contribute to building capacity for HPSR&A in Enugu state.

Aim: The study examines the contributions of HPRG in building individual, institutional and regional capacity for HPSR&A in Enugu state, using the concept of *Communities of Practice* as an analytic lens.

Methodology: This is a descriptive cross-sectional study that uses qualitative research methods to examine the contributions of HPRG's activities in building individual, organizational and regional capacity for HPSR&A, and to explore the factors that have influenced these contributions. The study population consisted of researchers, lecturers, policymakers and practitioners who have been involved in HPSR&A projects undertaken for the past thirteen years in HPRG. Purposive sampling with sequential referral was done and only key informants who met the selection criteria were selected. Data was collected through in-depth key informant interviews and review of relevant project reports and documents, and analysed manually through thematic analysis. Rigour was ensured through reflexivity, audit trail and triangulation of data.

Ethics statement: Participation in the study was entirely voluntary. Participant information sheet was provided for each participant and a consent form was made available to those who indicated willingness to participate to sign. Information provided was kept confidential and participant anonymity was maintained. Careful attention was paid to respondents' non-verbal cues. Discomforts with responding to some questions and probes were noted and minimized by skipping to less discomforting topics on the guide.

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Findings: HPRG has contributed in building collective capacity for HPSR&A in Enugu state. It has enabled researchers gain new knowledge in HPSR&A through formal trainings. Through participation in HPSR&A projects and workshops, researchers have acquired additional research and communication skills. HPRG has strengthened institutional capacity for HPSR&A through research collaborations with other research groups in the College of Medicine and through providing technical support to policymakers in the State Ministry of Health (SMOH) in revising, designing and implementing policies, strategies and plans.

Enabling institutional structure such as time for research for tenured staff, mentorship and peer support, inter-departmental collaboration, relationship of trust between researchers and policymakers, and commonality of interests between HPRG and Enugu State Ministry of Health have enabled capacity building in HPSR&A. Other enablers are availability of funds from research grants and international collaborations that encourage knowledge sharing, skills building and accountability. The major constraint is that beyond HPRG, there is no vision for HPSR&A in the institution, and there are no formal structures (such as policies and funding) to support HPSR&A in Enugu state.

Discussion: The HPSR&A community in Enugu state is comprised of a diverse group of people (academics, policymakers and practitioners) who share a common vision for HPSR&A, have similar research interests and hold one another accountable for career progression. Although level of participation in the community varied from 'active' participants to 'peripheral' participants, all members were regarded as legitimate participants. HPRG has contributed to strengthening collective capacity for HPSR&A within this community. Most HPSR&A projects of HPRG have been implemented through international collaborations that enable sharing of knowledge and building of skills. Some of these collaborations require that partners are held accountable for implementing capacity building activities. HPRG's ability to contribute to individual competence for HPSR&A is enabled by its dual action of building capacity through didactic learning and participation in research. In some instances, there were no direct activities of HPRG aimed at building the capacity of people beyond the core-team of investigators. However, through feedback meetings and progress report meetings, people learned new concepts and better ways of doing things which they could decide to apply in their practices. Hence, learning happened through HPSR&A activities even if that was not a deliberate intention of the activity.

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Conclusion: The Health Policy Research Group has contributed in building collective capacity for HPSR&A in Enugu state. It has provided favourable conditions for different categories of people (researchers, policymakers and practitioners) to engage for knowledge transfer and learning, and has also created a sense of identity for people involved in HPSR&A, whether as active players of legitimate peripheral participants.

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DECLARATION

I declare that the work presented herein; **The role of the Health Policy Research Group College of Medicine, University of Nigeria in building collective capacity for HPSR in Enugu State,** is original and that it has not been submitted for any degree or examination in any other university or institution for the award of a degree or certificate and that all sources of information and data used or quoted have been duly indicated and acknowledged.

Full Name: Mbachu, Chinyere Ojiugo

Signature : Dated: 02 October, 2017

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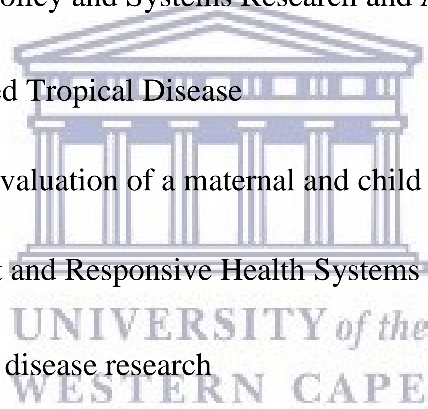
LIST OF ACRONYMS

CHEPSAA	Collaboration for Health Policy and Systems Analysis in Africa
COMUNEC	College of Medicine, University of Nigeria Enugu campus
CoP	Community of Practice
CREHS	Consortium for Research on Equitable Health Systems
EVAL Health	Evaluation in Health
HPRG	Health Policy Research Group
HPSR&A	Health Policy and Systems Research and Analysis
NTD	Neglected Tropical Disease
REVAMP	Realist evaluation of a maternal and child health programme
RESYST	Resilient and Responsive Health Systems
TDR	Tropical disease research
WHO	World Health Organization



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1 INTRODUCTION

This chapter provides a background to the study, the problem statement and the rationale of the study. It concludes with an outline of the rest of the research report.

1.1 Background

Health Policy and Systems Research and Analysis (HPSR&A) undertaken in low- and middle-income countries is increasing steadily with significant contributions from African researchers (Gilson & Raphaely, 2008, WHO 2017). Linking research to policies and decision-making for health care in a country is necessary for the provision of empirical and scientifically valid service delivery (Armstrong et al., 2007). HPSR&A is central to health systems development as it tries to draw a comprehensive picture of how the health system and broader determinants of health can shape and be shaped by policies (WHO, 2008; Sheikh et al., 2011).

HPSR&A seeks to understand and strengthen health systems from different entry points, including policy influence, societal values and actor interests (Jessani & Bennett, 2014). It draws upon a blend of disciplines that contribute to better understanding of complex health systems, actions and interactions of multiple actors', and their expressions of power in shaping and bringing about changes in the health system (Gilson et al, 2011; Agyepong et al, 2015). This diversity of disciplines and of individuals involved in HPSR&A calls for inter-disciplinary collaborations, which, if not well managed, may result in an unstable and disunited field (Uzochukwu et al, 2016). Secondly, there is the potential risk for lack of clarity and common understanding of HPSRs scientific basis among researchers and practitioners (Sheikh et al, 2011; Hoffman et al, 2012; Uzochukwu et al, 2016).

The growing interest in HPSR&A reflects a need for adequate capacity in academic, research and health organizations, and thus the development of such capacity. So far HPSR&A capacity strengthening efforts have focused on the use of formalized training approaches that develop individual competencies to conduct or teach health policy and systems research (Tancred et al, 2016). In order to achieve sustainable gains in capacity development, formalized approaches need to be complemented by less formalized capacity strengthening methods such as networking, development of partnerships, and other collaboration activities (Wasko & Faraj, 2005).

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In Nigeria, HPSR&A is an emerging field. It has been stated that capacity to generate health policy and systems research evidence is inadequate, though there appears to be a growing interest in the field with researchers at different levels of knowledge, experience and expertise (Uzochukwu et al, 2012).

The Health Policy Research Group (HPRG) of the College of Medicine, University of Nigeria Enugu campus (COMUNEC) has in the past thirteen years been engaged in activities that aimed to contribute to building capacity for HPSR&A in the south-eastern region of Nigeria. The purpose of these capacity building activities is to promote systems thinking that enable collaborative and holistic approach to strengthening the health system. Researchers within the HPRG have been engaging a range of stakeholders to develop networking activities geared towards lobbying to prioritize HPSR&A perspective towards the implementation and dissemination of outcomes. This has led to a range of formal and informal activities and relationships with these different actors (Mirzoev et al., 2014).

This study examines the HPSR&A initiatives undertaken by HPRG to better understand how they have contributed to building collective HPSR&A capacity in Enugu state. The assessment is undertaken at individual, organizational and network levels using the concept of 'community of practice' as an analytic lens. Communities of practice are defined as *groups of people* that *share a concern or passion for what they do* and who, as a result of this, engage in a process of collective learning through regular interactions to enable them learn how to do what they do better (Cox, 2005; Kimble, 2006; Wenger, 2009).

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1.2 Problem Statement

The capacity to generate and use evidence for policymaking in the health system is inadequate in Nigeria. Hence, health policies and decisions are not evidence-informed and do not contribute to better health outcomes or health system strengthening. HPSR&A is a field of research and practice that has the potential to strengthen health systems through policy influence. However, it is a new field in Nigeria, with few experts and emerging experts. At the wider institutional level, structures that enable capacity building for HPSR&A are weak or non-existent. For instance, there is no vision for HPSR&A in most training institutions and Ministries of Health. Where the vision exists, it only does so within small groups or units such

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as HPRG, whose sphere of influence is limited by availability of funding and human resource capacity.

Several efforts have been made locally and with external support to build and/or strengthen capacity to produce and use evidence for policymaking. HPRG has for the past 13 years engaged in a number of different activities, including research, teaching, materials development and networking for HPSR&A., All of these activities have aimed to contribute to strengthen individual, institutional and regional capacity in HPSR&A. HPRG has used a combination of direct and indirect approaches in capacity building for HPSR&A. Some of its activities have used formalized approaches such as trainings, while some have used less formalized approaches such as hands-on mentorship through participation in research project implementation. However, we do not know if and how these activities have contributed to strengthening individual, institutional and regional capacity for HPSR&A.

1.3 Rationale of the Study

Reflecting on the contributions of HPRG's activities to building and strengthening capacity for HPSR&A in Enugu state will enable a better understanding of how successful these activities have been in achieving the desired outcome. It will also identify the contextual factors and mechanisms (including strength of implementation and management processes) that have enabled or constrained them. Most importantly, it will highlight lessons to be learnt and best practices that could be applied in future in implementing similar HPSR&A activities.

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1.4 Study Setting

This study was undertaken in Enugu State Nigeria using the Health Policy Research Group as a case study. Enugu state is one of the 36 states in Nigeria. It is located in south-east geo-political region and has several public-owned and private-owned tertiary schools. Enugu state has two of the thirty-three accredited Medical schools in Nigeria, one of which is the College of Medicine University of Nigeria. There are several research groups within the College of Medicine and these research groups are registered with the Research Directorate of University of Nigeria.

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The Health Policy Research Group (HPRG) was established in 2002, as an offshoot of the former Health Policy Research Unit of the Department of Pharmacology and Therapeutics within the College of Medicine at the University of Nigeria. The group is headed by a coordinator and its membership comprises of two other administrative staff, some research associates within and outside the University and affiliates from Federal and State Ministries of Health. The research associates include lecturers from various departments of the University, staff of civil society organizations, and staff of UN agencies and implementing partners. The exact number of members of HPRG fluctuates because associate members are affiliates are constantly joining or leaving the group. However, HPRG has a core team of about 12 researchers who are current members and have spent upwards of 6 years as associates. HPRG is primarily concerned with strengthening the Nigerian health system by promoting and advocating for the use of research evidence for health decision-making. HPRG primarily undertakes health systems research and has successfully conceptualized, designed and implemented several research projects solely and in partnership with other research consortia.

Some of HPRG's research projects have focused on exploring potential and feasibility of introducing new technologies and interventions for malaria control, designing and testing strategies for scaling up coverage of malaria control interventions and reducing inequities in access. Some other projects have focused on economic evaluation and contingent valuation of malaria and HIV control interventions; political economy of different health financing mechanisms and feasibility assessment of new funding mechanisms for scaling up free maternal and child health services in Nigeria; strengthening capacity for health policy and systems research in African institutions; building capacity for health policy and systems research, health technology assessment and economic evaluation for malaria and other NTDs; building resilient and responsive health systems through research into health systems governance and health financing; evaluation of the role of evidence in developing health policies; and realist evaluation of maternal and child health interventions in Nigeria.

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HPRG has also contributed research expertise, skills and evidence through its membership of the Consortium for Research on Equitable Health Systems (CREHS) crehs.lshtm.ac.uk, the Consortium for Health Policy and Systems Analysis in Africa, renamed Collaboration for Health Policy and Systems Analysis in Africa (CHEPSAA) hpsa-africa.org, Evaluation in Health (EVAL Health) www.eval-health.eu, and Resilient and Responsive Health Systems (RESYST) resyst.lshtm.ac.uk.

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Table 1: A cross-section of some projects implemented by HPRG alone and in collaboration with other groups

CONSORTIA PROJECTS		STANDALONE PROJECTS
CONSORTIUM	**PROJECT**	
Consortium for Research on Equitable Health Systems (CREHS)	Community Based health insurance scheme in Anambra State Nigeria: an analysis of policy Development, implementation and equity effects	Impact evaluation of malaria control interventions in Anambra state, Nigeria
	Assessment of policy development and implementation process of District Health System in Enugu State Nigeria	Economic Burden of Malaria in Nigeria
	Benefit and Financial Incidence analysis of different health care financing mechanisms in southeast Nigeria	Feasibility of (CBHI) scheme for Financial Risk Protection in Southeast Nigeria: An equity analysis
Research on Economics of Artemisinin-combination therapy (REACT)	Exploring potential and feasibility of introducing new technologies and interventions for malaria control	Cost Effectiveness Analysis and Willingness to Pay for Competing Diagnostic Strategies for Malaria in Nigeria
	Designing and testing strategies for scaling up coverage of malaria control interventions and reducing inequities in access	Constraints and Enabling factors to adoption of NHIS formal sector programme by State Governments
Evaluation in Health (EVAL-Health)	Evaluation of the role of evidence in developing health policies in Nigeria	Catastrophic Health Expenditure for the treatment of HIV/AIDS in Anambra State
Consortium for Health Policy and Systems Analysis in Africa (CHEPSAA)	Strengthening capacity for health policy and systems research in African institutions	Economic evaluation and contingent valuation of malaria and HIV control interventions
Resilient and Responsive Health Systems Consortium (RESYST)	Expanding fiscal space through increasing the effectiveness of tax collection systems in Lagos state	Political economy assessment of different health financing mechanisms in Nigeria
	Assessing performance of health care purchasers in Nigeria	Feasibility assessment of new funding mechanisms for scaling up free MCH services in Nigeria
	Examination of multiple funding flows to healthcare providers	Building capacity for health policy and systems research, health technology assessment and economic evaluation for malaria and other NTDs
	Strengthening accountability in Nigeria's health sector. Guidelines for implementing the Basic Health care Provision Fund	Realist evaluation of maternal and child health interventions in Nigeria.
	Exploring leadership in the health system with a gender lens	

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1.5 Report Outline

This mini thesis report consists of 6 chapters. The first chapter introduces the study and places it into context. The second chapter is a review of literature on health policy and systems research, capacity building and communities of practice. The third chapter is a description of the study methodology while the fourth chapter presents the results of the study. The fifth chapter is a discussion of the results and the sixth and final chapter presents the conclusion and recommendations drawn from the study.

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2 LITERATURE REVIEW

2.1 Health Policy and System Research and Analysis

HPSR&A is multidisciplinary and inter-disciplinary in nature (WHO, 2008), which implies that people came to this field with varied backgrounds, expertise, questions and epistemological approaches: some are trained social scientists who wish to apply their skills to health systems questions; many come from broad public health backgrounds, with some experience in disease control programs; others are clinical practitioners or researchers who have very limited exposure to social sciences (Ijsselmuiden et al., 2012; WHO, 2012; WHO, 2017). Given the diversity of individuals entering the field, there is the potential for lack of clarity and common understanding of its scientific basis; and poor communication between disciplines (Mirzoev et al., 2013). For this reason networking and communication are essential in HPSR&A to develop a common identity (Bennett et al., 2011). Its practice-oriented nature requires that practitioners communicate through shared experiences about what works and what doesn't in order to improve practice (Gilson et al., 2011). HPSR&A seeks to strengthen health systems starting from policy formulation to operational performance using evidence of what works, as well as the social processes and interactions that enable systems. In order to realize this, there needs to be ongoing interactions between producers and users of evidence. Capacity building is a legitimate way of achieving clarity and ensuring collaboration in the field of HPSR&A.

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2.2 Capacity Building in HPSR&A

The process of empowering individuals, institutions, organizations and nations to systematically define and prioritize their health problems, scientifically evaluate appropriate solutions to the problems and effectively apply the knowledge generated to health system improvements could be referred to as capacity building in HPSR&A (Lansang & Dennis, 2004). This process of capacity building can be considered at individual, institutional, organizational and regional levels with corresponding outputs. In order to achieve regional sustainability in capacity for HPSR&A, capacity building should occur across all levels of output.

Developing HPSR&A capacity at all levels requires a number of complementary short-term and long-term approaches. Lansang and Dennis (2004) developed a matrix of capacity building

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strategies at different levels and their likelihood of sustainability. They describe four approaches that include individual capacity building through formal academic training programmes and informal methods of mentorship and hands-on training that complement academic degrees. The third and fourth approaches which focus on institutional capacity building include: development of institutional partnerships between developed and developing countries to consolidate individual capacity building efforts into a collaboration; and creation of research centers of excellence at local and international levels (Lansang & Dennis, 2004). The likelihood for sustainability and quality assurance is higher as we move from individual-focused capacity building approaches to institution-focused approaches. Crisp et al (2000) also describe four approaches that have been applied to produce sustained change at different levels, and they include the bottom-up and top-down organizational approaches that are targeted towards developing a core of well-trained individuals in the organization, and creating enabling infrastructure within the organization that contribute to capacity, respectively. The last two are partnerships and community organizing approaches that focus on strengthening or forming new partnerships between organizations or groups of people who are otherwise unrelated, and working with communities and marginalized groups to address health problems (Crisp et al., 2000).. The success of these approaches in building sustainable capacity for health systems research lie in the ability of those engaged in capacity building to harmonize and build on their respective approaches and activities. This requires creating an environment that enables producers and users of research to work with and among themselves and continually enhancing this environment to hold their attention (Lansang & Dennis, 2004: Pitayarangsarit & Tangcharoensathien, 2009). In this regard, organizational factors in leadership and governance such as vision for HPSR&A, decision-making culture, financial governance, availability of champions and central support for HPSR&A contribute to creating an environment that fosters or hinders research (Mbacke, 2013).

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2.3 Definition and Elements of Communities of Practice

Communities of Practice (CoPs) is a useful concept for thinking about how one can strengthen (and build capacity of) an organization, field, or group of people who have goals or interests or practice in common. Communities of practice can be defined as *groups of people* that *share a concern or passion for what they do* and who, as a result of this, engage in a process of

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collective learning through regular interactions to enable them to learn how to do what they do better (Cox, 2005; Kimble 2006; Wenger, 2009).

In the CoP framework, learning is seen as a process that unfolds through participation in learning communities; and it is distributed among people at different levels of professional expertise, such that individual and group development result from legitimate participation through "*regular reflections and dialogue about field-based experiences with people who have varying levels of expertise"* (Buysse et al., 2003). Legitimacy for HPSR&A would mean that people are recognized as participants (members, stakeholders, contributors) in the field, regardless of their level of involvement which could be determined by: (i) length of time they have spent in the field (newcomers vs old timers); (ii) knowledge contribution to the field and scale of participation in HPSR&A activities; (iii) relative skills and competencies to undertake HPSR&A. As a collaborative approach, CoP draws on the expertise of researchers and experiences of practitioners to construct knowledge; and through the sharing of knowledge, builds upon and transforms what they know about effective practice (Buysse et al., 2003). Regardless of their varied forms, CoPs appear to share a basic structure of three fundamental elements namely: (i) shared domain of interest or knowledge, which defines a set of issues, creates a common ground and a sense of common identity, and shared competences that distinguish the group; (ii) a community of people who foster interactions and relationships based on mutual respect and trust to foster learning, engage in joint activities and discussions, and who care about this domain; and (iii) a shared practice they are developing with a set of frameworks, ideas, tools, information, styles, language, stories, and documents that community members share, and with that they can be effective in their domain (Wenger, 2009). When these elements function well together, they make a CoP an ideal knowledge structure – a social structure that can assume responsibility for developing and sharing knowledge (Wenger, 2009).

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3 RESEARCH DESIGN AND METHODOLOGY

This chapter presents the methodology used to carry out this study. It first outlines the research question, aim and objectives, and then gives details of the study design, population and sampling techniques. The methods of data collection and analysis are discussed, as well as strategies employed to ensure rigor. Finally, it describes the ethical issues and considerations relating to the study

3.1 Research Question

This study seeks to answer the question: How have the HPSR&A field-building activities of HPRG at COMUNEC contributed to building capacity for HPSR&A in Enugu state over the past 13 years?

3.2 Study Aim

The study aimed to examine the contributions of HPRG' in strengthening and building individual, institutional and regional capacity for HPSR&A in Enugu state.

3.3 Specific Objectives

The specific objectives of the study were:

1. To describe the HPSR&A activities of HPRG for the past 13 years in terms of actors, their relationships, their activities and processes.
2. To examine how the HPSR&A activities of HPRG have contributed to capacity building in terms of: (i) individual competence and institutional capacity to teach and do research; (ii) policymakers' and practitioners' capacity to design and implement better policies and health systems interventions; and (iii) strengthening communication and relationships between researchers and policymakers
3. To explore whether the HPSR&A community in Enugu state can be thought of as a *Community of Practice.*

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3.4 Study Design

This is an exploratory cross-sectional study using qualitative research methods to examine the contributions of HPRG in building individual and organizational capacity for HPSR&A in the region. The methods used were in-depth interviews and documentary review. Qualitative research is useful for understanding how different people experience a particular phenomenon, and the multiple realities that exist for them. It allows for deeper exploration of the research question and engagement with study participants in order to answer "what?", "how?" and "why?" questions (Pope and Mays, 2006; Green and Thorogood, 2009).

In-depth key informant interviews and documentary review of HPSR&A-related project documents undertaken by HPRG was done. Interviews are unique in that they allow the participants to give an account of their own views, values and understanding (Green and Thorogood, 2009). Individual interviews are beneficial because i) they are flexible and suitable for the type of participants who are most likely to provide information for this study, ii) they enable participants to express their views in more depth and discuss more freely about issues that might otherwise threaten group membership (Taylor, 2005; Pope and Mays, 2006); and iii) they enable deeper probing of complex or interesting responses (Dyson and Norrie, 2010).

The documentary review provided data that represents project intent, process and outcomes. This was useful to the researcher for probing during data collection because it enabled better understanding of projects that were implemented before the researcher joined the group. Documentary review data was also useful for filling the gaps in respondents' recall of older and earlier projects, as well as for complementing interview findings.

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3.5 Study Population and Sampling

The study population consisted of researchers, lecturere, policymakers and practitioners who have been involved in HPSR&A activities undertaken in the past thirteen years in HPRG, COMUNEC. The major categories of participants were: (i) project administrators, coordinators and managers in HPRG; (ii) senior and junior researchers within and outside HPRG; and (iii) HPRG's policy networks – key policymakers in the State Ministry of Health and politicians.

Considering sample size for the study, the initial target was to interview 15-20 people, starting with key participants or beneficiaries of HPSR&A activities implemented by HPRG anytime

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between 2002 and 2015. Twelve people were identified to form the first set of participants to be interviewed and additional four were added through referrals. Three of these people could not be interviewed due to their very busy schedules and unavailability during the period of data collection. Hence, sixteen people were contacted, and thirteen of them were interviewed. Although it is stated that for qualitative research, sampling should continue till data saturation (Green and Thorogood, 2009; Suter, 2012), the main purpose of this study is to gain "rich data" from each respondent, and it mostly isn't reasonable to continue to saturation for a study this small.

Purposive sampling was done to ensure that all key categories of respondents who are relevant to the subject of study are covered, but also including some age and gender diversity to represent differences in perspectives. Hence, there were 5 female and 8 male respondents; 10 of them were researchers, 2 policymakers and 1 research administrator. Out of the 10 researchers, there were 2 junior researchers, 4 mid-career researchers and 4 senior researchers. Purposive sampling is a non-probability sampling technique where participants are selected to serve a specific purpose because of their experience and expertise in the area of study. The specific approach applied in actual selection of respondents is critical case sampling (CCS), where respondents are chosen because they *"demonstrate a phenomenon or position that makes them pivotal in the process"* (Ritchie et al, 2003). This was done to ensure that there was representation of views from as many projects as possible that were implemented in the study period. They can provide valuable information that is critical to getting an understanding of the topic under study. CCS is also relevant to this study because it is evaluative and draws attention to particular features of a process (Ritchie et al, 2003).

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3.6 Data Collection

Two data collection methods were used in this study – i) review of relevant project documents such as proposals, meeting reports, evaluation reports, and end of project reports; and ii) in-depth interview of key informants. The use of multiple data collection methods to answer the research questions provided complementarity, triangulation and validation of data collected.

While review of project proposals and reports provided data that represents project intent, process and outcomes, the interviews supplied data that reflect actors' interpretation of the intent, process and outcomes. A combination of two or more of data collection methods also

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provides rich details of meaningful social and historical contexts and experiences that influence perceptions and actions of whomever or whatever is being studied (Suter, 2012). These descriptions of people's lived experiences, events or situations are often referred to as "thick" (Denzin, 1989).

Each document was reviewed to collect information on the type of capacity building activity proposed or implemented, the purpose of the activity, target beneficiaries or actual participants, source(s) of funding for the activity, and participants' reflections on the activity (where available).The documents reviewed included HPRG's reports from HPSR-related projects namely: (i) EVAL health evidence to policy project, (ii) CHEPSAA HPSR&A needs assessment study, (iii) CREHS accountability study, and (iv) RESYST health financing and governance studies. Policy briefs developed using findings from some of these studies were also reviewed. The study protocol and draft report of the WHO-TDR project on "Building capacity of policymakers and researchers on HPSR for control of endemic diseases" were also reviewed. Table 2 shows the list and characteristics of documents reviewed.

Table 2: List of documents reviewed

HPSR&A projects	Types of document reviewed	Number of documents reviewed	Source of documents
EVAL-Health	Report of Nigeria's evidence to policy research project	1	HPRG library (unpublished)
CHEPSAA	Report of needs assessment study Report of needs assessment feedback workshop	3 – • 2 country specific • 1 multi-country	CHEPSAA website www.hpsa-africa.org
CREHS	Report of accountability study of facility health committees	1	HPRG library (unpublished)
RESYST	Reports of capacity building workshop for researchers and policymakers Reports of feedback workshop on findings	3 • 2 capacity building • 1 feedback workshop	RESYST website resyst.lshtm.ac.uk HPRG library (unpublished)
WHO-TDR	Study protocol Draft report of capacity building for HPSR&A	2	HPRG library (unpublished)

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Concerning the in-depth interviews, each potential respondent was sent a postage mail with an information sheet containing a brief description of the purpose of the study, their part in the study and ethical issues. They were asked to provide convenient time and place for face-to-face interview if they are willing to participate. Data collection lasted for 3 months, which included time for booking and securing appointments. The interviews were conducted in English language using semi-structured questions that acted as a guide to open up discussion. The interviews were audio recorded with the consent of the participants. This was to ensure that no relevant information provided was lost while taking notes. Recording the interview also enabled the researcher to pay full attention to the respondents and take note of any non-verbal cues that might otherwise go unnoticed.

An interview guide was used to collect information from the respondents (Appendix 2). On-going data analysis during the data collection period was used to modify and refine the interview schedule throughout the data collection. The interview guide was reviewed by my supervisors for construct and content appropriateness. This was done to assess clarity of questions, ordering of the questions, and appropriateness of data generated by the study.

3.7 Rigor

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Some approaches to ensuring rigour that were used include: thick description of study setting; keeping an audit trail; triangulation of data from project reports and key informant interviews; on-going data analysis (described above); and reflexive practice.

A detailed description of the study setting and the study population was done *(see section 1.4, study settings)*. This description of who, where and what the findings actually relate to was done to enable other readers ascertain whether or not the study approach can be applied in their own setting (Malterud, 2001).

A record of the data collection and analysis processes was kept to take note of the evolution of the study design with respect to data collection and sample size. This is a recommended accountability practice that enables an observer auditor to assess the appropriateness of methodological shifts and structure, and the logic of inferences made (Creswell & Miller,

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2000). An audit trail also strengthens the reliability of the research because the documentation shows the thoroughness and honesty in the research process (Robson, 2011).

Triangulation of data from project reports and interview of key respondents for consistency was done (Suter, 2012). Supplementing key informant responses with documented reports enabled corroboration of findings. My supervisors acted as 'critical readers' to check for consistency and bring in additional perspectives.

3.7.1 Reflexivity and Bias

Initial reflection about my views and preconceived opinions regarding the topic of study set the agenda for assessing my subjectivity. Being a member of HPRG and having been involved in some of the HPSR&A-related research projects, I had my own views about whether and how these projects had contributed in capacity building for HPSR&A in Enugu state. I also had my opinions about the factors that contributed to HPRG's progress in this regard. These views influenced my questioning and line of probing during the data collection as well as my interpretation of responses during data analysis. In order to reduce the effects of my bias on data collection and analysis, after each interview, I would think through the questions I asked and my line of probing and make notes of potential biases in questions I asked and the ways I asked them. Then during data immersion, the responses that were elicited from such questions were highlighted and checked for consistency within the transcript and across respondents of similar category.

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Information recall was a significant barrier during data collection. Because the study required for interviewees to provide information on some projects that happened over 10 years ago, it was difficult for most of them to provide details. They were more likely to remember recent projects and most of the information they provided in-depth was based on more recent activities. The researcher had to rely on available project documents to fill in information gaps on earlier projects. In some of the interviews, the probes were directed in the line of particular projects that were least talked about.

3.8 Data Analysis

Data analysis proceeded simultaneously with data collection because emerging findings further informed the line of probing during interviews. Thematic content analysis was performed. This

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involved analysing the content of the data and categorising the recurrent or common themes with an aim to present the key elements of the participants' account (Green and Thorogood, 2009). NVivo software was used for coding of interview transcript. The audio-recorded interviews from the study were transcribed verbatim and a thorough accuracy check was done on the transcripts to ensure their validity. A careful study of all the transcripts was undertaken in order to obtain a general view and make sense of the data. One transcript that was particularly rich in information on the topic under study was selected from each category of respondents – researcher, policymaker, project administrator. These three transcripts were studied in detail and responses coded. These codes were used in the analyses of subsequent transcripts. The codes were categorised and linked into clusters of relatively similar responses. From the clusters, themes were generated, followed by a process of connecting and linking similar themes. The major themes and sub-themes used in coding responses were: (i) HPSR activities – types of activities, period of implementation, people involved, roles and relationships; (ii) Contributions of HPSR&A activities in capacity building – individual competence, institutional capacity, policymakers' and practitioners' capacity; (iii) Networking for HPSR&A – nature of engagement, benefits of engagement, HPRG's roles in networking for HPSR&A; (iv) Contextual influences on capacity building for HPSR&A – enablers and constraints; (v) Emerging themes – motivation for joining HPRG. These themes were used to structure the study's major findings.

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Making notes, referred to as *memos*, as the data collection and analysis proceeded was an important data analysis strategy employed in this study. Annotations were also made during data coding of each transcript in NVivo software. The memos and annotations were used to trace the thinking of the researcher and help guide a final conceptualization that answers research questions (or related ones) and some explanations for the answers.

3.9 Study Limitations

The nature of the study topic required that participant selection be guided by the researcher's knowledge or perception of people as having the characteristics of interest or the expertise and experience needed. Therefore, the identification of key informants for the interviews was based on the researcher's assumption that some people were more informed in particular areas of interest. This proved to be true in most cases but on some occasions, it was observed that the respondents were not as informed. In such instances, the questions asked were limited to

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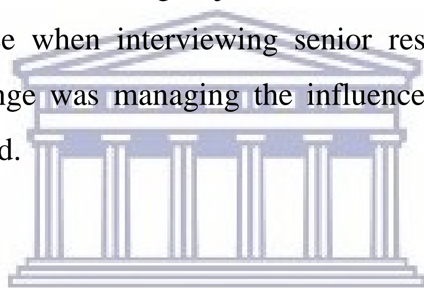
respondents' area of knowledge and they were asked to suggest people who may be better informed in other areas and/or documents that could be reviewed to obtain such information.

Some key informants could not be interviewed because their schedule made them unavailable during the period of data collection. The respondents that could not be interviewed included 1 policymaker/politician, the assistant coordinator of HPRG who is also a researcher, and HPRG's communications officer. This may have limited the breadth of data collected. However, the researcher ensured that most of the proposed key informants were interviewed in-depth and all proposed categories of actors involved in HPSR&A were represented.

The process of eliciting information from the key informants (in-depth interview) depended on the skill of the researcher and the participants' willingness to talk. Given that the researcher had conducted in-depth interviews, and analysis of qualitative research, the interviewing skill was good. However, a few challenges were encountered in eliciting information from colleagues, senior and junior alike. Being a junior researcher, I had to grapple with the challenge of power imbalance when interviewing senior researchers. With fellow junior researchers, the major challenge was managing the influence of their familiarity with the researcher on responses elicited.



3.10 Ethics Statement

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Participation in the study was entirely voluntary for all respondents. Each respondents was provided with a participant information sheet explaining the purpose of the research, their roles and rights as participants, and measures that would be taken to ensure confidentiality of information they would provide, such as labelling audio files or transcripts with codes that would only be known to researcher and destroying the files upon completion of the MPH programme (Appendix 3). Their consent to participate in the study and for the interviews to be audio-recorded was sought before the start of the interview. The researcher/interviewer explained the research process, confidentiality, anonymity and consent to each interviewee, and invited them to ask questions for clarification. Interviewees who indicated willingness to participate were then asked to sign a consent form (Appendix 4). Careful attention was paid to respondents' non-verbal cues. None of the respondents expressed discomfort during the interviews and all interviews were completed.

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Ethics approval for the research was obtained from the Health Research Ethics Committee of University of Nigeria Teaching Hospital, Enugu (Appendix 5), and the Ethics Committee at University of Western Cape (Appendix 6).

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4 RESULTS

4.1 Description of HPRG's HPSR Activities

4.1.1. Training workshops organized by HPRG

HPRG organizes various types of training workshops for different groups of actors, as components of on-going research. For every HPSR&A project undertaken by HPRG, researchers undergo planned and formal trainings in data collection and analysis. Unlike the trainings that happen for other types of research where research assistants are only taught how to administer the data collection tool, trainings for HPSR&A projects focus on ensuring that researchers understand the concepts, methodologies, approaches and frameworks that are used in the research proposal, as well as the research aim, questions and specific objectives. For research projects that involve concepts and methodologies that are relatively new, capacity building of researchers through training workshops is also embedded as part of the project activity (Ebenso et al, 2017). Other projects that are primarily focused on improving capacity for HPSR&A incorporate training workshops as strategies for implementation (Uzochukwu et al, 2012; Onwujekwe, 2015).

Training for data collection typically lasts for 3 days to 1 week and at times phased depending on the research process. For instance, the CHEPSAA needs assessment required only one training session on data collection for researchers whereas in the on-going project on Realist evaluation of maternal and child health programs in Nigeria data collection and training is conducted at different stages (Uzochukwu et al, 2012; Ebenso et al, 2017). These trainings are usually facilitated by the principal investigator(s), co-investigators and project managers. The training agenda usually includes: (i) overview of research protocol – justification, specific aims and objectives, methods, ethical considerations; (ii) introduction of study tools and in-depth learning of all questions; (iii) instruction on application of study tools; and (iv) description of roles, responsibilities and standard operating procedures.

Data analysis training usually lasts for a relatively shorter period and basically involves the researchers who would be involved in the analysis. Researchers are introduced to new and updated software packages, as the project may demand and trained on how to use them. Most of the data analysis trainings for HPSR&A projects have focused on qualitative research methods such as thematic analysis for CHEPSAA needs assessment study, framework analysis

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for RESYST health financing and governance studies, and realist evaluation for REVAMP study (Uzochukwu et al, 2012; Ebenso et al, 2017).

HPRG occasionally implements research projects that focus on capacity building for evidence-informed decision making. One of such projects, titled "Building capacity of users and producers of evidence in HPSR for better control of endemic diseases in Nigeria", is targeted at both users and producers of evidence in malaria, neglected tropical diseases (NTDs) and maternal and child health (Onwujekwe, 2015). Series of training workshops were conducted jointly and separately for users and producers of research evidence. At the last workshop they were asked to join one of three groups and in their groups, decide on what activities they would implement in their organizations within three months to improve evidence-informed decision making for the control of malaria and other NTDs, and health systems strengthening. An evaluation of their activities is scheduled to happen in the project implementation period.

4.1.2. Feedback workshops and validation meetings

Validation and dissemination of research findings is a core component of all HPRG research activities. Appropriate strategies, such as feedback meetings with stakeholders are used to communicate research evidence. These meetings usually bring together various stakeholders in health in Enugu State and provide opportunities for capacity building in research uptake as well as networking for HPSR&A. The stakeholders are diverse and drawn from various departments, disciplines and levels of practice. During these meetings, research findings are presented and participants are asked to discuss the findings in break-out groups, checking if and how they reflect (or not) the true picture and what participants are willing and capable to do to ensure the findings are used for decision making. On some occasions they were asked to outline concrete steps they would take or specific policies/plans they would revise using the available evidence (University of Nigeria College of Medicine, 2014). Available HPRG staff are distributed to different break-out groups to support the reflexive process and document activities and commitments.

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4.1.3. Short courses in HPSR&A organized by HPRG networks

Members and affiliates of HPRG have had the opportunity to attend externally funded short courses and capacity building workshops organized by HPRG's research networks outside the organization. Table 3 shows the HPSR&A short courses attended.

Table 3: HPSR&A courses attended by HPRG members and affiliates

HPSR&A-related Projects	Short courses supported	Organizing institution	number of attendees and seniority	Gender
CREHS	Understanding and analyzing health policy	University of Witwatersrand	4 (2 senior researchers; 2 policymakers)	All male (none repeated)
CHEPSAA	Introduction to complex health systems	University of Western Cape	3 (3 junior researchers)	All female (none repeated)
	Introduction to health policy & systems research	University of Western Cape	3 (junior researchers)	All female (all repeated)
RESYST	Introduction to complex health systems	University of Western Cape	5 (2 junior researchers; 2 teachers; 1 policymaker)	2 males 3 females (1 repeated)
	Introduction to health policy & systems research	University of Western Cape	5 (2 junior researchers; 2 teachers; 1 policymaker)	2 males 3 females (all repeated)
	Discrete choice experiments	London School of Hygiene and Tropical Medicine	2 (1 senior researcher and 1 junior researcher)	1 male 1 female (none repeated)

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4.2 Actors and Their Roles in HPSR&A in Enugu State

4.2.1 Actors involved HPSR&A in Enugu state

Various categories of people are involved in HPSR&A in Enugu state, and they play several roles. For most people, involvement in HPSR&A is a result of affiliations with HPRG. Hence, some people got involved out of personal interest and actively sought to join HPRG. Some others got involved by default, since they were already members of HPRG or had been recruited into HPSR&A-related projects of the group.

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Most respondents identified themselves and other people as belonging to and playing different roles in the field of HPSR&A in Enugu state. The groups of people identified were academics/lecturers; research associates, fellows and project administrators; policymakers and implementers in the State Ministry of Health and Legislative house; and implementing partners in the State such as Family health international (FHI) and Partnership for transforming health systems (PATHS 2).

"I have said Ministries of Health, policy makers at the different levels, the local government with the different health facilities" (P5, Project manager).

"I have been involved in the research that HPRG does, when we are looking at health systems and policy.... it's been quite some time now; well over 10 years since I have been working with the Health Policy Research Group" (P11, Senior researcher).

"We do research, we teach, we help to write policies and we help to advocate for the use of evidence, especially. We even do policy development, to make sure it is evidence-based, and that is my main focus" (P8, Senior researcher/administrator).

Some people identified themselves as playing dual roles in HPSR&A. For instance, when asked how he viewed himself in the field of HPSR&A, one respondent stated, *"I am a researcher. I also teach. I collect data, analyze and I do almost anything you can think of"* (P3, affiliate Researcher). Another person who had a similar response tried to prioritize his roles stating, *"Well, majorly, I could look at myself as a researcher, but beyond researching, I could say I am a teacher as well"* (P2, Junior researcher). A third person conclusively stated that, *"Most of us that are involved in Health Policy Research Group are lecturing in our various departments"* (P11, Senior researcher). Additionally, the project administrator also corroborated this in stating that she also participates in data management as the need arises, although she did not always find it as interesting as her primary administrative functions.

Mention was made of groups and organizations, outside Enugu state, that contribute to HPSR&A in the State through their collaborations with HPRG on research projects. For instance, in one of HPRG's research projects, it was noted that there were partner institutions from *"about five to seven countries"* (P4, Junior researcher). In describing another HPSR&A project of HPRG, it was again highlighted that,

"The project is in partnership with University of Leeds so the lead investigator is based at University of Leeds, but we are equal partners, being that we are the ones to collect data and

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analyse. We have the principal investigator here and a lot of senior researchers" (P5, Project manager).

Less frequently mentioned as belonging to the field of HPSR&A were postgraduate students who are undertaking research in health policy and systems-related fields. This could be because of their high mobility. However, they constitute a good proportion of people doing HPSR&A in Enugu state. They constitute about one-fifth of the research team members for any given HPSR&A project implemented by HPRG.

A few of the respondents also expressed their opinion of groups of people who were once involved in HPRG's HPSR&A activities, but have been excluded in recent times due to changes in research priorities. These are implementers at the local government level, health workers and non-government organizations (NGOs).

"The local government people, the director of primary healthcare or the secretary are quite critical. In recent times, people like the supervisor health are people forgotten but they are quite useful" (P7, Policymaker).

4.2.2 Contributions of the various actors to HPSR&A in Enugu state

People involved in HPSR&A contribute in different, but often overlapping, ways to building the field. There seems to be a relationship between people's contributions and their positions within and outside of HPRG. The extent to which they contribute is also related to their association or affiliation with HPRG

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The academics involved in HPSR&A are drawn from various departments in COMUNEC such as Health Administration and Management, Community Medicine, Economics, Sociology, Pharmacology and Dental Public Health. Their main contributions to the field of HPSR&A is training postgraduate students and policymakers, and generating and sharing research evidence for decision-making.

"In health financing, I teach. I also teach introductory health economics to PGD students. Apart from students, there are workshops for Enugu and Anambra State Ministry of Health Officers, a kind of capacity building workshop. On such platforms, I sometimes make presentations on health financing or economics" (P4, Junior researcher).

The research associates and fellows are mainly members of HPRG whose main contributions have been generating and sharing research evidence, managing research projects and other

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HPSR&A activities of the organization in teams. Apparently, some of the academics involved in HPSR&A were originally research assistants or fellows in HPRG, from where they migrated to faculty positions as lecturers in the University. Some of these lecturers who continue to partner with HPRG were referred to as research associates and they make up the majority of HPRG membership.

"I can say that I am mostly involved in generating evidence relating to health policy and system research, and dissemination. Fundamentally, what we do here in HPRGs is to generate evidence that is necessary for policy development and scale up of programs and interventions" (P6, Project manager).

"I joined as a researcher to review the health system and all those things. That was how I came on board with HPRG" (P4, Junior researcher).

"Let me start with Fiscal space study. I was involved, HI, NE, OO, JC were all involved. We finished the field work which was qualitative and quantitative. The ministry officials were interviewed and we did document review and monthly financial review which we analysed" (P4, Junior researcher).

"There is a team. We have the multidisciplinary team in HPRG, people with different backgrounds, medicine, public health, economics, sociology, biostatistics, pharmacology and clinicians. So many people have been involved. It is team work, and the team that undertakes a study depends on what the study needs and the appropriate team comes. HPRG is comprised of people from different areas" (P8, Senior researcher).

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Some policymakers and implementers in the State Ministry of Health were identified as role players in HPSR&A, albeit to different degrees. One policymaker in the State legislative house was specifically described as a champion of HPSR&A in the State. These groups of people have contributed to HPSR&A field-building activities of HPRG in the framing of research questions, implementation of research, dissemination of findings and advocacy for use in decision making. Some of their past roles in research implementation include mobilization of key informants for interviews, making government documents accessible to researchers, providing key information through in-depth interviews, and monitoring research standards. They have also been the target audience for most feedback, dissemination and capacity building meetings of HPRG.

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"Talking about policy makers, these things will depend on what one is doing. For instance, if you are having a research, the key people who are involved – the principal investigators – will arrange to meet the stakeholders so they will be aware of what we are doing and the particular issues we are looking at. If they had a policy or a guideline, they usually tell us.... They will even tell you other people that you need to also discuss with" (P11, Senior researcher).

"Of course, for you to be able to conduct such study, you must involve the stakeholders. I mean the Ministry of Health officials. We had focal persons from the Ministry and all the interviews that were done were from the Ministry. We involved them because without that, they will see us as strangers. Involving them helped in granting us access to key participants and some of the documents we requested" (P4, Junior researcher).

"In terms of people who are not researchers, we involved the National program manager at the beginning of the project to get buy-in and commitment, so that when work starts, his involvement will facilitate it and at the end when we produce evidence we hope that he would use that" (P5, Project manager).

"Like I told you, I got in because of my own position as chief executive of the implementation arm in the State Hospitals' Management Board" (P7, Policymaker).

The project administrator provides logistic support in implementing HPSR&A activities, and as such is considered as involved in HPSR&A. The HPRG project administrator considered her involvement in HPSR&A as default stating, *"Well, I guess it is because Health Policy Research Group, which is the organization where I work, is also all about Health Policy and Systems Research. They are involved in it and as the administrator there, I am also involved"* (P10, Administrator). Her specific contributions include: developing and executing micro-budgets for various activities, planning for field work and dissemination activities etc. She works closely with project managers and principal investigators in interfacing with research assistants on financial matters.

"When we were doing benefit and financial incidence of out-of-pocket payment, I was involved in the planning. It was in Anambra not Enugu. We planned how people will move, the vehicle arrangement, what they are going to need, some that will need to stay in Anambra for the period of study. We prepared everything and the day to day planning of how the project will run during the duration of data collection" (P10, Administrator).

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To further highlight how membership, association or affiliation with HPRG enables membership and contribution to HPSR&A, one respondent stated, *"because I belong to the group for Health Policy, most often when we carry out researches, we involve the policy makers, we disseminate information to them, so that they can use the finding to improve"* (P13, Affiliate researcher).

In undertaking HPSR&A activities, various role players interact and interdepend on each other at different stages to enable good progress and production of relevant outputs. This quote captures how such interaction occurred between researchers and policymakers,

"... Data collection was mostly carried out by HPRG members, but in the framing of the research questions we involved the permanent secretary from the Ministry of Health because we couldn't have come up with an appropriate topic or research question without their input. Then during data collection, we interviewed those from the Ministry of Health, the community, health care providers and the government house of assembly" (P6, Project manager).

Perceptions of levels of involvement varied. Terms such as 'floaters', 'young', 'regular', 'occasional', 'determinant', 'stakeholder', 'active' were used to describe people involved in HPSR&A. This clearly showed that the field of HPSR&A in the State consisted of people with diverse experience and expertise, as well as different levels of involvement and contribution to the field. Some people perceived themselves as very involved in the HPSR&A activities of HPRG, while a few considered themselves as 'floaters', not knowing much of what goes on. This was attributed to poor correspondence, ease of access to the group and preference for specific researchers' skills over others. However, all respondents perceived HPRG as providing opportunities for participation in HPSR&A, which they ordinarily would not have, and some expressed the desire to become more involved.

"To be honest with you, it is a matter of correspondence. I know that I am one of those floaters who need to come close to get abreast with the project and with the happenings in Health Policy Research Group" (P1, Junior researcher).

"We have some young lecturers that are coming up. Then we have a pool of people. Not everybody comes on regular bases. Occasionally, if there is expertise we need, and somebody in the University environment has it, we usually call on them" (P11, Senior researcher).

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"I would say I am a stakeholder, because in policy issues I certainly have to contribute. I may not be a determinant but at least I have a role to play, coming from implementation angle" (P7, Policymaker).

"I almost forgot the legislature, they have a role and they play that role. The current chairman house committee on health has been in research and he is quite an active young man" (P7, Policymaker).

An interesting finding with respect to perception of involvement was found in the response of a policymaker who separated the research component of HPSR&A and considered himself as not involved in that. However, he stated, *"I have been involved in implementation of health policies, I have also been involved in the development of some aspects of health policies at both the State and the National level"* (P9, Policymaker).

Table 4: Perceived roles of different actors in HPSR&A in Enugu state

Category of actor	HPSR&A activities		
	Capacity building	Evidence generation	*Knowledge translation
Academic	. Teach postgraduate students; . Supervise HPSR&A-related projects	. Collaborate with researchers in conceptualizing and undertaking research	. Publication of research articles . Presentation of research findings in scientific meetings
Researcher	. Co-supervise and support students undertaking research in HPSR&A . Organize and facilitate capacity building workshops	. Manage research projects . Conceptualize research . Frame HPSR questions . Collect and analyse data	. Undertake policy relevant research . Facilitate dissemination meetings . Produce policy briefs, research reports & research articles . Present at national and international meetings . Organize policy advocacy meetings
Policymaker in Ministry of Health		. Collaborate with researchers in conceptualizing research . Mobilize informants . Provide information/data	. Participate in advocacy meetings . Use evidence for decision and policy making
Legislator		. Collaborates with researchers in undertaking research . Provides information or data	. Participates in advocacy meetings . Uses evidence for decision and policy making
Post-graduate student	. Co-facilitate group activities during workshops	. Conceptualize research topics . Frame HPSR&A questions . Collect and analyse data	. Conceptualize research topics . Frame HPSR&A questions . Collect and analyse data
Administrator		. Grant management . Financial reporting . Data management	

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*Includes dissemination, advocacy for use and use of evidence

4.3 Contributions of HPRG's HPSR&A Activities in Capacity Building

4.3.1 Individual competence of researchers and lecturers

Through the different opportunities provided, individuals have acquired skills and competencies in researching, analyzing and teaching health policy and systems, as well as in communicating research findings.

"A lot of people have learnt different skills on the job, like data analysis, data collection, developing of tools. Some people have also through their involvement with HPRG obtained (academic) scholarships and have gone for formal training in so many disciplines that are relevant to health policy and system research" (P8, Senior researcher)

Participation in research activity was more frequently mentioned as a means of learning new concepts and acquiring new skills in HPSR&A. These skills were acquired through training and in the processes of research conceptualization, development of proposal and research method, implementation of research and dissemination of findings. Some supporting quotes are:

"I will think that what has been quite useful is the fact that we have the capacity to do research. Many people that have been trained along the line and more people are still being trained" (P11, Senior researcher)

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"I have had the opportunity and privilege of having used all the methods you'd find in Health Policy and Systems Research in the years I have worked in HPRG. I am better able to turn most research questions into health system questions. That skill of looking at a straight forward epidemiological question and turning it into health policy and system question is a skill that I have developed and some members of the HPRG have also developed. In terms of communication and dissemination of findings, we are able to do that through workshops, and publishing findings in peer reviewed journals. We have also disseminated findings through health systems conferences and health economics conference" (P5, Project manager).

The following quote highlights that the respondent learnt a new concept, had better appreciation of it in practice (proposal development), and applied the experience he got from researching on an issue in his teaching.

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"It (HPSR&A project) built my capacity, because before then I had not come across that concept, 'fiscal space'. But when I came on board, [and] I started reading then knew what it meant. Writing the proposals and all those things now deepened my understanding. It also broadened my knowledge on the issues around why some ministries of health are incapacitated in demanding for budget increase. Such studies always open knowledge that you can fall back on and be able to give examples to students" (P4, Junior researcher).

Another quote highlights a researcher's excitement at being involved in applying a HPSR&A research methodology which she describes as 'novel' in HPRG.

"We are using a realist evaluation approach, the first that is being done in HPRG. I don't know if every other person is as excited as I am. It is a novel thing and I believe that we have a lot to learn from the realist evaluation" (P5, Project manager)

The extent to which these activities were perceived to contribute to individual competence, and the kinds of competencies gained differed among respondents depending on their degree of involvement in the research activity.

Concerning the RESYST project, one respondent was of the opinion that most people who were originally involved in the purchasing study did not gain new skills because *"they were too busy with other things during the analysis and they didn't really play much role. I think at the time, people really felt that the analysis was going to be too vigorous because we had the inductive and deductive approach, people felt that they couldn't go through that"* (P5, Project manager). She also implied that HPRG researchers who were willing to learn and commit their time to the project were better positioned to acquire new skills or strengthen existing ones, because *"you can only learn what you have been part of and you are willing to learn"* (P5, Project manager).

Most members of HPRG interviewed had attended short courses in HPSR&A since joining the group. They were of the opinion that these courses had deepened their understanding of HPSR&A and equipped them with theoretical knowledge required to better apply their skills. For instance, one participant felt that the winter courses he attended on HPSR&A gave him a better grasp of HPSR&A and contributed to making him a better teacher.

"*I have been able to get involved in capacity building exercises, one of which happened at University of Western Cape, on health policy and systems research. Now what I could get from that workshop helped me to actually become a little versatile on health policy issues and*

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analysis. And as I came back, I found out that it was quite relevant for my teaching practice and career" (P2, Junior researcher).

Conferences and scientific meetings also provide opportunities for strengthening individual competence in research communication and power point presentations.

"We have attended conference which have helped our presentation skills, building of power points. Those are skills different people have acquired at different levels in HPRG" (P5, Project manager).

The scope of individual capacity development through HPRG's HPSR&A activities varied among respondents; from basic understanding of concepts, ability to apply research and teaching skills and improved skills in project management capacity.

For some, it basically improved their awareness and understanding of concepts such as health system, health policy analysis and health systems research. For others, it included improved skills in research and analysis, awareness of and improved skills in application of interactive teaching methods for HPSR&A, capacity to form and sustain research networks, and opportunities to improve on postgraduate research thesis drawing from HPRG's research projects.

With particular reference to qualitative data analysis skills, one respondent mentioned that through HPRG's HPSR&A project, she was able to conquer her 'phobia' of qualitative research. HPRG exposed her to HPSR and qualitative research methods and she has since acquired skills that have enabled analyze qualitative data.

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"Before I joined HPRG, I had never done any qualitative analysis. But now, I am fairly confident in doing qualitative work, and it doesn't scare me anymore. I have skills in the use of NVivo software for qualitative analysis. During the evidence in policymaking project I mentioned earlier, we had a training on qualitative data analysis and the use of software" (P5, Project manager).

The following quote highlights the role of HPRG in strengthening the respondent's HPSR&A network and how he has benefitted from this network in his research work, seeking out and finding technical assistance when needed, *"One thing I have been able to get as a researcher in affiliation with HPRG is the network of researchers who belong to HPRG. Usually, when you have issues around how to proceed with survey research work, it is not very difficult to get someone to help you find ways around what you are doing"* (P2, Junior researcher).

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HPRG has provided a platform for members to progress in their academic careers as students, lecturers and researchers. As captured in the quotes below, postgraduate students have had the opportunity of leveraging HPRG's projects for their thesis, lecturers have progressed relatively faster in their careers because they are able to publish using outputs from HPSR&A projects, and researchers are able and confident to undertake data collection and analysis on their own, with little or no external help.

"There was the Gates malaria partnership in Anambra state. That was the first thing we did with HPRG in 2001/2002. In fact it was actually part of what I used for my MSc project. [....]. So many people have gotten way up. I got lecturer job and the number of publications I had was instrumental. [...]. You can't be there and have problem with your research, it is not possible. Because you would have done a couple of analyses. So, doing your own is not a problem" (P4, Junior researcher).

Some practical examples of how particular HPSR&A projects contributed in building individual competencies of researchers were given such as:

"RESYST project really did build my capacity in a significant way because of the way the questions were framed. We had to develop the proposal and bid for funding. I was involved from developing the proposal to developing the study tools and framework, and the policy briefs and communication materials. It was really a full package project that put me through all the stages, and I am better for it" (P5, Project manager).

Some respondents stated that managing HPSR&A projects improved their project management and administrative skills in areas such as financial reporting, planning for field work, managing people (research assistants) and technical reporting. With special reference to financial reporting, one respondent had acquired skills in calculating person-time, using timesheet, reporting online using the EU format and other international reporting styles.

"I have improved in my capacity to do the financial report and the quarterly report. I learnt the international way of doing it – the standard – how to calculate person-month and then the timesheet" (P10, Administrator).

4.3.2 Institutional capacity of College of Medicine and University of Nigeria

Concerning institutional capacity for HPSR&A, respondents expressed opinions that since membership of HPRG is constituted of different Departments in the University, transfer of

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knowledge and skills occurs passively through interactions between HPRG members and their colleagues in various Departments. Secondly, HPRG actively collaborates with other staff of the College and University in research, often bringing HPSR&A perspectives to such collaborations, hence raising awareness of and building skills in HPSR&A among these staff.

"Because HPRG draws from different departments in the college of medicine, people take back what they have gained to their different departments. I am aware that HPRG has assisted two departments in the last year in developing their protocol and tools. With assistance of skills present in HPRG, they were turned into health policy and system questions that could strengthen the health system" (P5, Project manager).

HPRG also plays a vital role in the University research committee and influences the direction of research units, often changing them from pure biomedical or social science research to health systems research focus. It has also contributed to creating more demand for HPSR&A in the institution through spearheading postgraduate training and research in related fields of health economics, health systems management and health policy.

"It (HPRG) has contributed. Many people want to study in this area, formally or informally. The postgraduate program in health economics, management and policy, many people are now registered and being trained, and many people want to be involved in research. Then there is the new Institute of Public Health's department of health system and policy. I see them as off-shoots of HPRG because they are to be staffed by people who are part of HPRG" (P8, Senior researcher).

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On another note, HPRG organizes and invites some staff members of the College to training workshops where new competencies are gained and expressions of willingness to share with other colleagues made. However, there has been no objective assessment of impact beyond the participants.

"Within the College, we have invited other departments to some step down workshops which they have gained from and gave positive feedback and did promise to set up in their departments. Though we haven't followed up to see what is happening" (P5, Project manager).

HPRG is currently implementing a project that aims to build capacity of producers and users of research evidence for evidence-based decision making in health. It has conducted a series of training workshops for faculty members in College of Medicine to acquire skills in undertaking HPSR&A, stakeholder analysis and getting research into policy, plans and strategies.

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Some respondents mentioned that because of HPRG's activities in HPSR&A, University of Nigeria has the largest conglomeration of people who are skilled in HPSR&A, and contributes the highest number of research outputs in HPSR&A in the West African sub-region.

"It (HPRG) has contributed in a long way in the College, in the University and in Nigeria. HPRG has the highest number of health policy analysis and health policy and system researchers in Nigeria" (P8, Senior researcher).

4.3.3 Institutional capacity of Policymakers' and Practitioners' in the State Ministry of Health

All respondents were of the opinion that HPRG supports policymakers in the State Ministry of Health (SMOH) with developing policies, strategies and plans, informed by evidence generated from HPSR&A projects.

A policymaker categorically stated that until HPRG began to support the State Ministry of Health in HPSR&A, they were not doing research or using research evidence for decision making for lack of human capacity and funding.

"We had a Department of Planning, Research and Statistics at the Ministry of Health but they are only involved in planning. They don't do research because of obvious reasons - It was only when this Health Policy Research Group came on board that we started seeing the impact, they were always carrying us along; they will come and give us briefing of what they have done. We see people trying to look at what happens, what we have been doing (research) and coming up with advice for further planning" (P9, Policymaker).

The following quotes point to HPRG's role in supporting policymakers with developing a health financing strategy. It highlights the sustainability of this capacity improvement because policymakers are able to apply the skill without HPRG's assistance.

"When the issue of MTSS (Medium-term Sector Strategy) came up, HPRG guided the ministry, and it helped them in drafting their budget. The ministry no uses it in articulating their 3-year budget plan" (P4, Junior researcher).

"There are three other policies that were handled by HPRG. It was like a training centred on developing and implementing health policies, and advocacies on health policies (P7, Policymaker).

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The capacity of policymakers and practitioners to undertake HPSR&A and use evidence for policy/decision making and practice in Enugu state was perceived to be as a result of the linkages that exist between them and HPRG. *"In most cases in the ministry of health, when they want to do something, they still liaise with HPRG. So, even if they want to write their report, they must have gotten some information from the group"* (P4, Junior researcher). Hence, their capacity is limited and they still have to depend on HPRG for information.

HPRG also provides platforms for interactions between policymakers, programme managers and researchers. This is done through capacity building workshops that also enable exchange of ideas.

"HPRG conducts capacity building workshops for the ministry, those in the health sector are invited and we discuss several issues on health financing, universal health coverage, and it builds their capacity" (P4, Junior researcher).

While undertaking this research study, HPRG was concurrently implementing a project on capacity building for evidence-informed decision making in health among policymakers and practitioners in Enugu state.

"Another project to build the capacity of policymakers in Ministries of health on how to use research findings or evidence in their policies, strategies and programs for disease control, is ongoing now" (P5, Project manager).

Although HPRG was perceived as providing technical support to health policymakers and practitioners in the State, there were varied opinions on whether and how these capacity building efforts have translated into better health policies and practice in Enugu state.

Amongst HPRG members, one respondent who was less convinced of the effects had this to say: "*as somebody in the system, I know that Enugu state is not always ready to follow. With the kind of investment that has happened in the state, the state should do better, but it is not"* (P4, Junior researcher). A second respondent expressed her optimism in stating that, *"HPRG has engaged ministries of health in two states (Enugu and Anambra) in the past for malaria control, and where the ministries and potential users of evidence were involved at the beginning of the research, they were quick to use the evidence and that has helped in malaria control as I know, at least in Enugu state"* (P5, Project manager). Her statement was corroborated by that of a policymaker who gave specific example of how HPRG's research

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evidence from a HPSR&A-related project informed drug management and monitoring practice in the state.

"There was one research they (HPRG) carried out on anti-malaria drugs in hospitals and patent medicine stores in Enugu state. They found that a high percentage were substandard and many private practitioners were resisting the use of ACTs. The federal ministry of health came up with a policy that first line treatment of malaria should be with ACTs. Then we called private practitioners and gave them the orientation and that they should stop the use of Chloroquine. Many of them complained that they were not getting good results with the ACTs. As a result of the research by HPRG we found that a reason why they were not getting good result was that they were using substandard drugs. So, we had to step up monitoring of the facilities to get rid of the substandard ACTs that were causing the confusion in the Health system. We also had to step up preservation of ACTs we were getting in bulk from the federal ministry of health. We had to maintain proper standard of storage at our central medical store and in the health facilities to maintain the potency of these drugs" (P9, Policymaker).

Overall, the extent to which HPRG can contribute to improving HPSR&A capacity amongst policymakers and programme managers is a function of individual willingness and commitment. One policymaker put it succintly, stating that *"It depends on commitment. You can take a horse to the river but you can't make it drink. The design of HPRG trying to get people understand or be involved in the development of policies and implementation is beautiful. How people who participate take it, is another thing. For me, it helped, it is helping"* (P7, Policymaker).

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4.3.4 Factors that Have Influenced HPRG's Contributions to HPSR&A Capacity

Having a HPSR&A champion who is approachable and willing to share opportunities for learning and improvement was commonly mentioned as an enabler. From the interview responses, it was gathered that other contributors to gaining individual competencies in HPSR&A are: (i) reaching out for help or advice when needed from the right source; (ii) desire to belong to HPSR&A community; (iii) open communication channels through which people could share ideas, opportunities, other useful information; (iv) unrestricted access to HPRG for researchers from different disciplines and practitioners alike; (iv) shared vision and common research interests/focus; (v) expectations from colleagues – members holding one another accountable for career progress.

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Respondents identified some factors that have constrained capacity for HPSR&A in Enugu State Ministry of Health. There is high turnover of staff in the Ministry of health and these staff movements are irregular, usually unplanned and could be politically motivated. Hence, there are no opportunities for transfer of knowledge and skills in HPSR&A. People get trained, acquire the skills through practice and then move on to other Ministries. Also, there is no formal structure of mentorship within the Ministry of Health.

Other factors that have influenced HPRG's contribution in building capacity for HPSR&A in Enugu state are presented in Table 5.

Table 5: Enablers and constraints to capacity building for HPSR&A

Capacity type	Enablers	Constraints
Individual competence	• Enabling institutional structure – time for research for lecturers; availability of office space • Mentorship and support from more experienced researchers • Motivation and desire for self-improvement among researchers • Opportunities for collaboration with peers with similar focus • HPRG's 'open-door' policy – multidiscipline, various levels of skill • Access to materials for research	• Organizational policies, protocol and procedures that limit capacity building – e.g. high staff turnover results in poor transfer of skills
Institutional capacity	HPRG's relationship, collaboration and partnership with COMUNEC	Lack of specific vision for HPSR&A
Policymakers & practitioners	• Facilitated capacity of HPRG to ministry • Type and interest of leadership in the ministry • Relationship of trust & Common interest between HPRG and Ministry of Health	Difficulty reaching policymakers (due to their busy schedule)
Cross-cuttting	• Availability of funding for research capacity development • International collaborations – knowledge sharing and skills building; accountability	

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5. DISCUSSION

HPRG has involved various groups of actors, in different capacities, in its HPSR&A activities in Enugu state. It has established regular and wide ranging communication and information exchange with policymakers and practitioners in the health sector, while building and strengthening individual and organizational capacity for HPSR&A. HPRG was perceived by most respondents to have contributed to strengthening the HPSR&A capacity of the College of Medicine, and indeed the whole of University of Nigeria, in various ways. It acts as the dedicated home for HPSR&A and is promoting the use of various HPSR&A curricula for postgraduate teaching, both of which are required for strengthening organizational capacity in HPSR&A (Bennett et al 2011). HPRG provides different opportunities for researchers and affiliates to improve their capacity in HPSR&A as individuals through: (i) participation in research activity – proposal writing, design of study tools, data collection, analysis, interpretation; (ii) training courses; (iii) national, regional and international conferences and scientific meetings; (iv) workshops and stakeholder meetings.

Most of the people involved in HPSR&A in Enugu state developed interest a result of their affiliation with HPRG and their contributions in the field have been through HPRG initiated or led activities. Lave and Wenger (1991) highlight that the process of developing a CoP starts with people being involved in a set of relationships. Then, mutual interests develop over time and joint activities are undertaken that result in collective learning (Wenger, 1998).

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The contributions of various members of the HPSR&A community to building the field in Enugu varied according to extent of involvement in HPRG's research activities. Hence, some people perceived themselves or others as 'floaters' while others considered themselves or others as 'stakeholders'. Core-HPRG members, who also happened to participate more in projects as co-investigators, research assistants or project managers, perceived themselves as better able to frame HPSR questions, undertake HPSR&A using different methodologies, and communicate research findings using appropriate styles. This supports Wenger's (1999) conclusion that active participation in the practices of a CoP improves learning, and responds to an important question on the kinds of engagements that enable learning to take place (Smith, 2003). However, Lave and Wenger (1991) argue that as 'newcomers' to a CoP move towards full participation, they acquire the skills required to participate actively. Therefore, as the 'floaters' spend more time engaging and relating with 'stakeholders', and activities of the CoP

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as "legitimate peripheral participants", their interests are engaged towards becoming active members of the CoP (Smith, 2003).

In some instances, there were no direct activities of HPRG aimed at building the capacity of people beyond the core-team of investigators. However, through feedback meetings and progress report meetings, people learn new concepts and better ways of doing things which they could decide to apply in their practices. Hence, learning happened through HPSR&A activities even if that was not a deliberate intention of the activity.

HPRG's ability to contribute to individual competence for HPSR&A is enabled by its dual action of building capacity through knowledge improvement (didactic learning) and skills building (practice in research process). Other factors that enabled individuals gain competencies in HPSR&A include working with a group of people that share a common vision, have similar research interests and who hold one another accountable for career progress. These are some of the things that characterize communities of practice (Wenger and Snyder, 2000).

HPRG has contributed to building the institutional capacity of COMUNEC for HPSR&A. Its relationship and collaboration with different departments and units in the College of Medicine has contributed to its ability to strengthen COMUNEC's capacity for researching and teaching HPSR&A. For instance, the two departments that teach core HPSR&A courses are staffed and headed by members of HPRG, most of whom started out as research assistants in HPRG before progressing to faculty (teaching) positions. HPRG is represented, through its members, in various departments in the College and this enables transfer of knowledge and skills to other staff of the College. This indirect influence has resulted in heightened awareness about HPSR&A among staff of the College, as well as changes in research priorities and approaches. Through HPRG's projects in HPSR&A, some members of staff have acquired and improved their teaching skills and methods, and the content of their lecture notes reflect current methodologies and practices in HPSR&A.

Although lecturers in University of Nigeria are able to apply newly acquired HPSR&A skills to their teaching and research practice, they are not obligated to do so. This is because the principles and practice of HPSR&A are not institutionalized in the College. This corroborates findings from a previous study which reported that College of Medicine University of Nigeria did not have a specific vision for health policy and systems research. This could be traced to the relative newness of the field and the fact that it may not be as well represented or understood as are the older fields of biomedical and social science research .This lack of vision and non-

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institutionalization of HPSR&A contributes to slowing the pace of growth of the field (Bennett et al 2011).

HPRG has made considerable progress with strengthening policymaker and practitioners' capacity for HPSR&A. The coordinators of HPRG and researchers have had good and long-standing relationships with leaders in the public health sector and through this channel of communication are able to identify and focus on research that is useful for priority health problems. HPRG is thus able to influence the priorities of policymakers by making them more HPSR&A focused. HPRG undertakes research that policymakers and implementers find useful for decision making and practice in health, and involves them at the early stages of research planning and implementation. HPRG's role in building capacity of policymakers and practitioners in HPSR&A has been enabled by, (i) having a leader in the Ministry of Health who had mutual interest in health system strengthening through HPSR&A as HPRG did; (ii) HPRG's facilitated capacity to build their skills and provide technical support to practitioners at no cost to the government; and (iii) the cordial and trust-based relationship HPRG has with policymakers and practitioners in the Ministry. However, some organizational policies and bureaucratic procedures in the State Ministry of Health make it difficult for staff capacity to be built in HPSR&A.

Some factors that cut across the three levels of capacity were also identified as influencing HPRG's contributions to capacity building in HPSR&A. Availability of funds through HPSR&A projects has enabled HPRG to undertake some activities that are specifically targeted at capacity building. Most of these HPSR&A projects have been implemented through international collaborations that enable sharing of knowledge and building of skills, and in some of these collaborations, partners are held accountable for implementing capacity building activities. There are some organizational structures that enable HPSR&A capacity building efforts such as time allocation for research and self-development, availability of office space for research. Most studies that have examined HPSR&A capacity highlight the tangible contributors such as organization vision, availability of funding and infrastructure (Uneke, 2011; Uzochukwu et al, 2012; Mirzoev et al, 2014). A few studies have examined and reported the contributions of less tangible and intangible factors such as networks and relationships that enable information sharing and skills building (Agyepong, 2015). Hence, drawing attention to these intangible factors (WHO, 2017).

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6 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

HPSR&A is an emerging field that requires support in terms of capacity building. Also, due to the nature of HPSR&A, people from different academic backgrounds and with diverse skills enter the field, creating a need for continuous capacity improvement. Evidence shows that capacity constraints constitute a major challenge in the delivery of HPSR&A for health systems strengthening. This capacity constraint cuts across individual competence for generating, teaching and using HPSR&A, as well as organizational capacity.

The Health Policy Research Group has contributed in building capacity for HPSR&A in Enugu state. It has provided favourable conditions for different categories of people (researchers, policymakers and practitioners) to engage for knowledge transfer and learning, and has also created a sense of identity for people involved in HPSR&A, whether as active players or as legitimate peripheral participants.

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6.2 Recommendations

The following recommendations for improving HPRG's role in HPSR&A capacity building in the region are being made based on the findings from the study:

- Further development of HPSR&A as a field requires supportive and stable institutional environments and dedicated leadership. The first step is to have a specific vision for HPSR&A within and outside University of Nigeria that is shared among all stakeholders, not only those within HPRG's direct influence. The next step would be to develop HPSR&A policies, plans and/or strategies and provide resources for implementation.
- Create more formal structures that make newcomers feel accepted as "legitimate peripheral participants" and encourage them to progress to active participants. An exploratory study of the factors that may enable full participation in the COP may participate would be useful.

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APPENDICES

APPENDIX 1: Time line of some HPRG's HPSR-related activities

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<tr><td>2002</td><td>2003</td><td>2004</td><td>2005</td><td>2006</td><td>2007</td><td>2008</td><td>2009</td><td>2010</td><td>2011</td><td>2012</td><td>2013</td><td>2014</td><td>2015</td></tr>
<tr><td colspan="9">HEPNET</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td colspan="7">CREHS</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td colspan="2">AHPSR</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td colspan="3">WHO/TDR/AHPSR</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="5">CHEPSAA</td></tr>
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APPENDIX 2: IN-DEPTH INTERVIEW GUIDE

Introductory questions: Participants profile and motivations to work in the field of HPSR

1. Could you please briefly introduce yourself and tell me a bit about your career journey up to when you started working in HPRG? *(Prompters: How did you come to join HPRG; How long have you been in HPRG; What motivated and still motivates you to work in HPRG etc)*
2. How do you see yourself in the field of HPSR&A? *(Probes – do you see yourself as a teacher, researcher, research user, administrator etc)*
3. What motivated you to work in the field of HPSR&A and in what ways?

Exploring HPRG's HPSR activities and their contributions to capacity building

4. Since joining HPRG what HPSR and HPSR-related projects have been carried out? Could you please describe these projects to me in details in terms of:
    a. when it took place (or if they are still going on)
    b. who was involved in the project and in what ways *(probe for internal and external actors; and roles in projects)*
    c. how did these people who were involved in the project engage with each other
5. Which of these projects, if any, were you involved in and in what way? How did you engage with others in the project team? (*This question will only be asked if participant has not addressed their own roles in question 4)*
6. In your knowledge or from your perspective, how have these projects contributed in building
    a. the capacity (skills and competencies) of individuals in HPSR&A *(Probe for contributions to teaching; evidence generation, communication and use; problem identification; successful grant applications)*
    b. the capacity of your institution in HPSR&A
    c. Enugu states' capacity for HPSR&A (and beyond)
7. What, in your knowledge or opinion, has influenced the contributions of these projects to capacity building and in what ways? *(Probe at the different levels of capacity as in question 6 for contextual factors and processes of implementation)*

Key actors involved in HPSR in Enugu state and their relationships

8. Who is involved in the field of HPSR in Enugu state and in what ways?
9. In what ways do these people engage with each other what form the bases of these engagements? *(Probe for method of engagement, frequency and reasons for engagement, and what actually happens when they engage)*
10. What has influenced how these HPSR&A actors' engage with each other and in what ways?
11. Would you consider the HPSR&A community in Enugu state a Community of Practice? What are your reasons?

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APPENDIX 3: PARTICIPANT INFORMATION SHEET

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Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

Project title: The role of the Health Policy Research Group, College of Medicine University of Nigeria, in building collective capacity for HPSR in Enugu State

What is this study about?

This is a research project being conducted by Chinyere Mbachu as part of her MPH studies at the University of the Western Cape. I am inviting you to participate in this research project because you have gained some experience, having taken part in one way or the other in the HPSR activities of HPRG, COMUNEC. The purpose of this research project is to reflect on and evaluate how HPRG's research activities in health policy and systems have contributed in building and strengthening capacity for HPSR in Enugu state. This will enable us to gain a better understanding of how successful these activities have been in achieving the desired outcome and the contextual factors and mechanisms (including strength of implementation and management processes) that have enabled or constrained them. Most importantly, it will highlight lessons to be learnt and best practices that could be applied in future in implementing similar HPSR activities that hope to contribute to capacity building.

What will I be asked to do if I agree to participate?

You will be asked to participate in an in-depth interview that will last for 30-45 minutes as a key informant. During the interview, you will be asked to describe the HPSR activities that you know of and/or have been involved in and discuss your perspective on whether and how these activities have contributed to building individual competences and skills for HPSR, as well as institutional and regional capacities. Your opinion on actors' engagement in HPSR activities in HPRG and Enugu state will also be sought during the interview.

Would my participation in this study be kept confidential?

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The research involves making an audiotape of the interview with you. This is to enable a complete capture of our discussion so I do not miss out on any important information you will provide in the notes that will be taken. The audio file will be stored in a computer file for the period of the study; only the researcher will have access to this file; and the file will eventually be destroyed upon completion of the researcher's MPH programme. The researcher undertakes to protect your identity and the nature of your contribution. To ensure your anonymity, (1) your name will not be included in the interview transcripts or labelled on the audio file; (2) a code or identification key will be placed on the interview transcripts and the audio file; (3) through the identification key, the researcher will be able to link the audio files and transcripts to your identity; and (4) only the researcher will have access to the identification key.

To ensure your confidentiality, the information you provide will be stored in a password-protected computer file and the password will be known only to the researcher (me).

If a report or article about this research project is written, your identity will be protected.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise 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.

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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 HPRG's HPSR activities and their contributions to capacity building for HPSR. We hope that, in the future, other people might benefit from this study through improved understanding of the factors that could influence how HPSR field-building actives contribute to capacity building and best practices to be applied in future implementation of similar HPSR activities that hope to contribute to capacity building.

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

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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 Chinyere Mbachu in the School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Chinyere Mbachu at:

Address: Health policy research group, College of Medicine University of Nigeria Enugu campus

Phone: +2348033401942

Email: chinyere23ng@gmail.com

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 Helen Schneider

School of Public Health

Head of Department

University of the Western Cape

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Prof José Frantz

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

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This research has been approved by the University of the Western Cape's Senate Research Committee. (REFERENCE NUMBER: *to be inserted on receipt thereof from SR*)

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APPENDIX 4: PARTICIPANT CONSENT FORM

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

Title of Research Project: Project title: The role of the Health Policy Research Group College of Medicine, University of Nigeria in building collective capacity for HPSR in Enugu State

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.

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___ I agree to be audio taped during my participation in this study.

___ I do not agree to be audio taped during my participation in this study.

Participant's Name………………………..

Participant's Signature……………………………….

Date………………………

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