

IMPROVING MATERNAL HEALTH USING PARTICIPATORY ACTION RESEARCH WITH WOMEN LIVING IN RURAL PAPUA NEW GUINEA

Submitted by Nina Joseph

RN, RM, Dip.Ed. (University of Papua New Guinea, Goroka Campus),

Ba (Nursing), MS (Nursing, Flinders University, Australia)

A dissertation submitted in fulfilment of the requirements for the award of Doctor
of Philosophy in Nursing

January 2013

School of Nursing and Midwifery

Faculty of Health

The University of Newcastle, New South Wales, Australia

Statement of Originality

The thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

8th January, 2013

Signature of Candidate

Date

Dedication

This thesis is dedicated to my late parents, Susie and Joseph Aite. They loved me unconditionally and inspired me to reach my goal in life. Their unwavering confidence motivated me to persevere in this work despite their untimely passing during my PhD journey.

To God Be the Glory.

Acknowledgements

I am indebted to many wonderful people. I offer my sincere gratitude to the women who participated in this study. I thank the four participants who accompanied me through Phase One of this study set in Newcastle. Their devotion, enthusiasm and support for me as a novice researcher were invaluable. We built relationships which are ongoing. In Lomakunauru village, Papua New Guinea (PNG), I researched alongside ten women who found time to share their childbearing experiences with me. Listening to their stories was humbling and insightful. I thank these village women for sharing their ideas to improve maternal health. Further I thank the thirty or more village women who joined the group meetings. I sensed that together we can make this world a better and safer place for the birth of our children and grandchildren.

My aim was to explore ways to improve maternal health in PNG and this study was to be a community development project. I enrolled as a PhD candidate in Nursing and not in Midwifery although I am a midwife. I wish to acknowledge Professor Tina Koch's extensive knowledge of participatory action research (PAR) which allowed me to explore ways I could research alongside women.

I sincerely thank my supervisors Professor Isabel Higgins and Professor Tina Koch for their ongoing dedication and support to me. You have walked alongside me throughout the duration of three and half years of this study. You demonstrated not only dedication, support, guidance, and encouragement, but you also believed in my ability to conduct the study and complete it successfully. With determination and outstanding research skills from both of you, you have worked tirelessly to bring this study to a conclusion. I am deeply moved by your support. Thank you for believing that my aims to improve maternal health were achievable.

To the following organisations and individuals; no words can adequately measure my gratitude towards your great assistance:

The Australian Government, via AusAID for funding this PhD study through the Australian Development Scholarships (ADS) in conjunction with the PNG Scholarship team. The University of Newcastle, Australia, in particular, the staff of the: School of Nursing and Midwifery; administration staff, Graduate Office, Counselling Services, International Office staff, IT staff, Security and Library namely Debbie Booth for invaluable assistance which has made my student life at the University of Newcastle a rewarding experience. The Pacific Adventist University (PAU) in PNG staff and students, New Ireland Provincial Administration, Kavieng General Hospital staff, Pr Nelson Gaah and staff of the Kavieng Seventh-Day Adventist Mission, Murat Local Level Government, My family and relatives whose dedication

and unwavering support encouraged me to pursue my study despite numerous challenges, PNG-Newcastle friends and many other colleagues for friendship and encouragement, Dr Nancy Buasi, Dr Jacques Boulet, Gwenda Sanderson, Jane Groeneveld, Rhonda Waiyo and family, Hennie Kiruwi and family, Dr Lalen Simeon and family, Dr Jennifer Litau and family, Leah Ongugo, Roven Clark and family, Rosaline Lapan-Baker and family, Ruth Colman, and Roven Clark and Stuart Korova for verifying language translations, Barry Walters and Ruth Colman who willingly edited this manuscript.

Speak up for those who cannot speak for themselves,

For the rights of all who are destitute,

Speak up and judge fairly,

Defend the rights of the poor and needy.

(The Bible: Proverbs 31:9 New International Version, 2007)

Contents

Statement of Originality	ii
Dedication	iii
Acknowledgements.....	iv
Acronyms	xiii
Glossary.....	15
Abstract.....	18
Chapter One : Introduction to the Study	21
Background.....	22
Chapter Two : Context for the Study	39
Introduction	40
Re-orienting Primary Health Care in PNG	45
Participation in Primary Health Care.....	47
The Principles of Democracy	48
PNG Political System	48
Health care in PNG.....	51
Chapter Three : Literature Review	58
Introduction	59
An overview of maternal health	59
Safe Motherhood	60
Maternal mortality	60
Monitoring maternal mortality.....	61
The direct causes of maternal mortality.....	62
Maternal mortality is preventable.....	62
Safe motherhood and Advocacy.....	63
Family Planning	64
Abortion Services	65
Antenatal care	66
Skilled birth attendants	67
Traditional birth attendants	68
Free maternal health care services	70
Emergency obstetric care in acute settings	71
Community-based maternity interventions.....	72
Health programs for adolescents.....	72
Education of girls.....	72
Health information for couples	73
Malaria control programs	73
Birthing kits	74
Reducing poverty.....	74
Water and sanitation	74
Nutrition and dietary supplements	75
Conclusion.....	75
Chapter Four : Participatory Action Research: A justification of my chosen methodology	76
Introduction	78
Participatory Action Research	78
Community-based participatory research (CBPR) in health	79
Why I have used Participatory Action Research methodology in this study	81
Koch and Kralik's (2006) approach to Participatory Action Research	83
Conclusion.....	86
Chapter Five : The Research Process.....	88
Introduction	89
Koch and Kralik's (2006) Research Approach.....	89
The Participatory Action Research Process	90
Phase One: Apprenticeship in Participatory Action Research, Newcastle	91
Safety in the field, Newcastle	91
Research Questions.....	92
Objectives	92

Recruitment of women PNG village.....	95
Ethical considerations.....	97
Voluntary participation.....	98
Informed consent.....	98
Anonymity.....	99
Confidentiality.....	99
Other specific ethical issues related to the study.....	99
Cultural sensitivity.....	99
Data Generation.....	101
Questioning.....	102
Analysis of data.....	102
One-to-one interviews.....	103
One-to-one interview analysis framework.....	103
Participatory Action Research groups.....	104
Being an ‘insider’ researcher.....	104
Contextual data.....	107
Journal reflections and evaluation of the research process.....	107
Rigour considerations.....	108
Trustworthiness.....	108
Credibility.....	108
Transferability.....	109
Dependability.....	109
Conclusion.....	110
Chapter Six : Phase One Newcastle Apprenticeship in Participatory Action Research.....	112
Introduction.....	113
Phase One: Newcastle study.....	113
One-to-one interviews.....	113
Researcher’s reflections.....	116
Participatory action research group meetings.....	125
Preparation for PAR group.....	126
Group norms.....	126
Number of PAR group sessions.....	126
Phase One PAR group.....	126
Common story.....	127
Women’s response to the common story.....	128
Phase One actions resulting from PAR group.....	129
How will Phase One inform Phase Two?.....	131
Reflections about my apprenticeship.....	132
Considering disclosure and building relationships.....	132
Maintaining a field journal.....	133
Relationship of field journal with decision trail.....	134
Facilitation.....	134
Conclusion.....	135
Chapter Seven : Entering the field and describing the context of Lomakunauru Village.....	138
Introduction.....	139
Section 1: Travel and Safety challenges in PNG.....	139
Preparation for the field research.....	140
Field research equipment.....	140
Gaining permission to enter the research field.....	141
Constraints of entering the research field.....	141
Shipment of field equipment.....	142
Sea transport.....	143
Electricity.....	143
Communication with my supervisors by telephone and Internet.....	143
Section Two: Village context.....	144
Papua New Guinea.....	144
New Ireland Province.....	144
Lomakunauru: geography and traditional culture.....	148
Malaria.....	165
Dental problems.....	166

Domestic violence	166
Sanitation and water supply	167
Economic issues	167
Making gardens and harvesting food	169
Cooking food	170
Personal safety	175
My observation in Lomakunauru	175
Chapter Eight : Phase Two Study in Lomakunauru Village - One to one interviews.....	177
Introduction	178
Context	178
Preparation	179
Recruitment of village women.....	180
Venue.....	180
Reflection	181
Recording	181
Analysis	183
Validating each story collaboratively	183
Writing stories with women.....	184
Wendy's story.....	208
Discussion of the story commonalities	235
Room for improvement in maternal care: communication	240
Could maternal health practice be improved?	243
Conclusion.....	245
Chapter Nine : Lomakunauru Village: Participatory Action Research Group	247
Introduction	248
Time frame of Phase Two study	248
Negotiating support for the study	248
Preparation.....	249
Factors that shaped women's decision to attend Participatory Action Research Groups	251
Facilitation	251
Setting the scene at the first Participatory Action Research group	252
Ethical considerations during Participatory Action Research group meetings	252
Setting group norms: rules made by participants	254
Creating maternal mortality awareness during first PAR meeting	255
Participatory Action Research Group Discussion	256
Build a Local Health Centre	258
Appointment of ten traditional birth attendants	259
Researcher reflections	261
Group dynamics	262
Conclusion.....	263
Chapter Ten: Discussion.....	264
Introduction	265
Antenatal care	266
Family Planning.....	266
Skilled birth attendant.....	266
Trained traditional birth attendants	269
The Newcastle-PNG PAR group	271
Revisiting Lomakunauru village.....	271
Practical Safe Motherhood Issues.....	274
Safe Motherhood: an ideal antenatal care program	274
Practice issues: Antenatal care.....	274
Practice issues: intrapartum and postpartum care	277
Good practice: positive outcomes of pregnancy and birthing.....	278
What did the villagers want?	279
Women requested information on pregnancy and birthing	279
Training traditional birth attendants	280
Health Post: Is it a possibility in this village?	280
What can be done to improve maternal health?	281
Linking this study within the larger PNG health sector.....	282
Improving PNG maternal health with external support.....	283

Conclusion.....	285
Chapter Eleven: Conclusion.....	287
Introduction	288
Meeting the study's objectives	288
Phase One: Apprenticeship.....	289
Phase Two: In Lomakunauru village.....	290
Stories told.....	290
Toward reform and improvement of maternal health	290
Implications and recommendations	291
Limitations of the study.....	293
References	294
APPENDICES	306
Phase One Study: Newcastle, Australia.....	307
APPENDIX 1: University of Newcastle- HREC ETHICS APPROVAL LETTER	307
Phase Two study: Lomakunauru, PNG	307
APPENDIX 2: LETTER OF EXPRESSION OF INTEREST FOR PNG-NEWCASTLE WOMEN	309
APPENDIX 3: RECRUITMENT POSTER FOR PHASE ONE STUDY.....	310
APPENDIX 4: INFORMATION LETTER FOR PHASE ONE: NEWCASTLE	311
APPENDIX 5: CONSENT FORM FOR PHASE ONE STUDY, NEWCASTLE	316
APPENDIX 6: EXPEDITED APPROVAL FROM UON-HREC: PHASE TWO STUDY IN PNG	319
APPENDIX 7: LETTER FOR VILLAGE LEADER, LOMAKUNAURU VILLAGE, PNG	323
APPENDIX 8: INFORMATION STATEMENT LETTER FOR PHASE TWO STUDY	325
APPENDIX 9: INFORMATION STATEMENT LETTER TRANSLATED TO TOK PISIN	331
APPENDIX 10: INFORMATION LETTER TRANSLATED TO MUSSAU LANGUAGE	337
APPENDIX 13: POSTER TRANSLATED TO MUSSAU LANGUAGE.....	343
APPENDIX 14: CONSENT FORM IN ENGLISH FOR PHASE TWO STUDY, PNG	344
APPENDIX 15: CONSENT FORM TRANSLATED TO TOK PISIN, PNG	346
APPENDIX 16: CONSENT FORM TRANSLATED TO MUSSAU LANGUAGE.....	348
APPENDIX 17: LETTER OF EXPRESSION OF INTEREST IN ENGLISH	350
APPENDIX 18: INFORMATION LETTER TRANSLATED TO TOK PISIN	351
APPENDIX 19: INFORMATION STATEMENT LETTER IN MUSSAU LANGUAGE	356
APPENDIX 22: PAU RESEARCH APPROVAL LETTER FOR PHASE TWO STUDY IN PNG	364

List of Figures

Figure 2.1: Papua New Guinea	53
Figure 7.1: Villages of Mussau Island	148
Figure 7.2: Lomakunauru Village showing the church in the foreground and community buildings in the background	150

List of Tables

Table 8.1: Participants' details.....	185
---------------------------------------	-----

Acronyms

ADB- Asian Development Bank

ANG- Air Niu Gini

AusAID- Australian Agency for International Development

EmOC – Emergency obstetric care

GoPNG- Government of Papua New Guinea

HREC- Human research ethics committee

MCH- Maternal and child health

MDG- Millennium Development Goal

MLLG – Murat Local Level Government

MMR – Maternal mortality ratio

NDOH- National Department of Health

NIP- New Ireland Province

PAR – Participatory action research

PAU- Pacific Adventist University

PHC – Primary health care

PHC – Pakasi health Centre

PNG - Papua New Guinea

PPH - Postpartum haemorrhage

UK - United Kingdom

UON- University of Newcastle

UPNG - University of Papua new Guinea

USA – United States of America

SDA- Seventh-Day Adventist

TBA- Traditional birth attendant

UNICEF- United Nations Children Fund

UNFPA- United Nations Population Fund

WHO- World Health Organisation

Glossary

Abortion: Cessation of pregnancy (expulsion or extraction of embryo/foetus) before 22 weeks of pregnancy or foetus weighs less than 500g. Abortion may be spontaneous (due to natural causes, such as miscarriage) or induced (made to happen).

Childbearing Years: The reproductive age span of women, assumed for statistical purposes to be 15-44 or 15-49 years of age.

Community Mobilization: Community mobilises on deliberate, participatory processes to involve local institutions, local leaders, community groups, and members of the community to organise for collective action toward a common purpose. Community mobilization is characterized by respect for the community and its priorities areas.

Emergency Obstetric Care (EmOC) — Responds to unexpected complications such as haemorrhage and obstructed labour with blood transfusion, anaesthesia, and surgery. It does not include the management of problem pregnancies, monitoring of labour, or neonatal special care.

Maternal Mortality: The death of a woman while pregnant, during delivery or within 42 days (six weeks) of termination of pregnancy, irrespective of the duration and the site of pregnancy. The cause of death is always related to or aggravated by the pregnancy or its management; it does not include accidental or incidental causes.

Maternal Mortality Rate: The number of women who die while pregnant or during the first 42 days following delivery per 100,000 women of reproductive age in a given year for any cause related to or aggravated by pregnancy, but not from accidental or incidental causes. The rate reflects the maternal mortality ratio and the fertility rate; it is influenced by the likelihood of becoming pregnant and by the obstetric risk.

Maternal Mortality Ratio: The ratio reflects the risk women face of dying when she is pregnant. The number of women who die during pregnancy or during the first 42 days after delivery per 100,000 live births in a given year from any cause related to or aggravated by pregnancy, but not from accidental or incidental causes.

Number of maternal deaths in a year per (100,000) live births in a year.

Midwife: A midwife" is a professional who has successfully completed the prescribed course of studies in midwifery and has acquired proficiency or the requisite qualifications to be registered and/or legally licensed to practice midwifery. S/he is able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct births on her own responsibility and to care for the newborn and the infant. Such care includes preventive measures;

detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. She has an important task in health counselling and education for the woman and the family and community. This work should involve antenatal education, preparation for parenthood and areas of gynaecology, family planning and childcare. She may practice in hospitals, clinics, health units, domiciliary conditions or in any other service." (Joint ICM/FIGO/WHO definition, 1992).

Obstetric emergency: A severe, life-threatening condition that is related to pregnancy or delivery that requires urgent medical intervention (EmOC) in order to prevent the likely death of the woman. An obstetric emergency: May occur any time during a pregnancy, delivery or up to six weeks after childbirth may occur suddenly without any warning. It requires urgent action to refer a woman immediately to the nearest referral unit for further management.

Public health: Is "the science and art of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organizations, public and private, communities and individuals.

Postpartum Haemorrhage: The genital tract blood loss of 500 ml or more postpartum.

Primary postpartum haemorrhage is all occurrences of bleeding within 24 hours postpartum. Secondary postpartum haemorrhage occurs after 24 hours postpartum and up to 6 weeks later.

Reproductive health: A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and to its functions and processes. Reproductive health means people have satisfying sex lives and that they have the capability to reproduce and have the freedom to decide if, when and how often to do so. Implicit in this are the right of men and women to be informed of, and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to have safe pregnancy that results in positive outcomes not only for the woman and her newborn but the entire family.

Safe Motherhood: The goal of safe motherhood is to ensure that every woman has access to a full range of high-quality, affordable sexual and reproductive health services, especially maternal care and treatment of obstetric emergencies to reduce death and disability.

Traditional Birth Attendant (TBA): A traditional birth attendant is a person (usually a woman) who assists women especially during childbearing process. One initially acquired her skills by giving birth herself or through apprenticeship with other TBAs. She lives in the community in which she practices.

Unsafe Abortion: It is a procedure for terminating unwanted pregnancies usually by lay persons in unhygienic environment.

Vacuum extraction is a medical intervention used by doctors and trained midwives to assist difficult and prolonged second stage of labour.

Abstract

Papua New Guinea (PNG) has one of the highest maternal mortality rates in the Pacific Region. My thesis is that safe birthing is a human right and this has been denied to many PNG women. My research question: 'What can be done to improve maternal health in PNG?' is in line with Global Millennium Development Goal 5 and favoured as a community development research approach which allowed me to research alongside fourteen women.

Participatory action research (PAR) as articulated by Koch and Kralik was conducted in two phases. Phase One was an apprenticeship in PAR process conducted in Newcastle under the guidance of the PhD supervisors. Storytelling and facilitating group processes were data generation and analysis strategies learned. The objectives for Phase Two were: (1) to collaboratively explore maternal health, examine and describe factors and contexts that are associated with maternal mortality in Lomakunauru village, PNG; and (2) to build awareness about maternal mortality through the PAR process and alongside village women and collaboratively decide on action and /or reform strategies.

Fourteen women told their stories about pregnancy and birthing: four English speaking PNG women living in Newcastle (Phase 1) and ten Lomakunauru village women speaking their own languages (Phase 2). The student researcher is indigenous to this area and speaks several local languages. Stories were transcribed verbatim and each story was returned to the women for their validation and ownership.

Storied data were analysed and commonalities in village women's experiences were revealed. Women were voiceless in their birthing process. Rural populations are thinly spread and health services are located many kilometres away, often across open seas. Hence the distance a woman needed to travel to gain access to maternal care was one of the major problems recognised. Lack of support from husbands during birthing was common and not surprising in patriarchal communities. Women's preference for gender specific care was noted. Nurses assisting women during the intrapartum process were portrayed as perpetrators of negligence and/or abuse. Spiritual devotion and trust in God during birthing gave women strength. In this Seventh Day Adventist village abortion as a birth control measure was unacceptable.

Village women were brought together to discuss ways to promote maternal health. Awareness was raised about the problems associated with maternal mortality. Resultant action was that women wanted to build an accessible Health Post in the centre of the village. The Health Post would be run by traditional birthing attendants (TBAs). Ten women in this PAR group volunteered to complete TBA educational preparation.

This study shows what is possible when women are given a voice. Grass roots organizations led by

women are likely to be sustainable in the promotion of maternal health. Educational preparation of TBAs is one of the recommendations given because professional registered midwives are not affordable in PNG context.

