



## What motivates midwifery students to study midwifery in Papua New Guinea?

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### ABSTRACT

**Introduction:** Midwives in Papua New Guinea have a vital role to play in addressing the high maternal and neonatal mortality rate. Attracting applicants in sufficient numbers and quality to study midwifery has been challenging in some countries.

**Aim:** The aim of this study was to explore the motivation of students to study midwifery in Papua New Guinea. Findings from this study will assist in midwifery workforce recruitment and retention.

**Methods:** Between 2012-2014, midwifery students (n=298) from the four midwifery schools in Papua New Guinea were surveyed on their perceptions regarding their midwifery studies. In addition, 25 midwifery students from the 2014 cohort were interviewed. One part of the data collection process asked the students to describe their motivation to become a midwife with the question: *Why did you choose to study midwifery?* A content and thematic analysis of this question was undertaken using descriptive study design.

**Results:** 194 (65% response rate) students provided between 1-3 different responses to the question, making a total of 246 responses. Three main themes emerged which were *recognising a public need; recognising professional needs; and, building upon experience.*

**Discussion:** Forty-one percent (n=101) of midwifery students in Papua New Guinea studied midwifery because they wanted to help lower the high maternal mortality in the country. This is a unique finding reflecting the reality of maternal and child health in Papua New Guinea and is of great contrast to the motivations of midwifery students in similarly low to middle income countries in the region and globally.

**Keywords:** Papua New Guinea; midwifery; motivation; students; qualitative research

### INTRODUCTION

Situated in the South Pacific ocean, Papua New Guinea (PNG) consists of 4 regions, 22 provinces and an estimated population of over 7.4 million people.<sup>1</sup> The people mostly live in the highlands and rural, remote or isolated areas and islands. The PNG culture contains rich and diverse traditions and includes around 800 language groups. There are significant challenges including violence (especially towards women and children),<sup>2</sup> poverty, short life expectancy, high infant mortality (63 per 1000 live births)<sup>3</sup> and a particularly high rate of maternal mortality.<sup>4</sup>

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Papua New Guinea's maternal mortality ratio is estimated to be as high as 733 maternal deaths per 100,000 live births.<sup>4</sup> Like many low and middle income countries (LMIC), PNG has a significant shortage of qualified midwives and it has been calculated that the country needs to quadruple their midwifery workforce to improve quality and coverage.<sup>5</sup> The ratio of midwives to pregnant women in PNG has been stated as 1:1000 which equates to a 50% unmet need for midwives.<sup>6</sup> These services are provided by various cadres of health workers in PNG, mostly comprising of Registered Nurses (RN) and Community Health Workers (CHW).

Quality midwifery care provided at scale has been recognised as one of the most effective methods of reducing maternal mortality.<sup>6</sup> It is essential that focused efforts are directed toward increasing the number and quality of midwives. However, attracting suitable applicants to study midwifery and retaining them in the workforce has been a challenge. Prior to 2012, midwifery education was not prioritised, there were few midwifery courses and students did not have any financial assistance to study midwifery. In 2011, there were less than 300 midwives in the country. By 2014, there were around 750 midwives providing Sexual, Reproductive, Maternal, Newborn and Child Health (SRMNCH) services in PNG<sup>7, 8</sup> but this number is still inadequate to meet the country's needs.

Registered nurses and CHWs are trained to care for women during pregnancy, birth and postnatal periods, recognise common complications and follow standard protocols. However, they often do not have the skills, knowledge and attitudes required to provide holistic, respectful and comprehensive care for women, nor are they trained in additional skills required to care for women when complications and emergencies occur. In PNG, to become a midwife, students must first be a registered nurse and therefore understanding the motivations to leave nursing and study midwifery is important. This will assist in workforce planning and the development of recruitment strategies to attract a sufficient number and quality of applicants to the midwifery profession.

### **Why do students choose to become midwives?**

The motivation for becoming a midwife in low to middle income countries is informed by only a few studies of quality and none from the Pacific Region. Students' motivations to study

midwifery in low income countries have been categorised as either personal and intrinsic, or professional and extrinsic<sup>9-16</sup>. Personal reasons for studying midwifery in developed countries such as Australia, the UK and US have included an interest in pregnancy and childbirth,<sup>9, 11</sup> feelings of altruism or wanting to help others<sup>9, 13, 15</sup> and a personal experience of pregnancy or birth.<sup>15</sup> Professional motivations have included job security and salary,<sup>13, 14</sup> opportunities for continuing professional development and increased autonomy.<sup>10</sup>

There is a lack of consensus in the literature regarding specific personal attributes or characteristics which typify the 'good' midwifery student but it has been found that high levels of emotional intelligence and literacy can be predictive of competent nursing practice<sup>17</sup> and longevity in nursing and midwifery.<sup>18, 19</sup> For health workers in low to middle income countries, the motivations for studying are context-specific, and appear to be different from those in developed countries. One of the primary motivations is to be employed<sup>20</sup> and not necessarily to belong to a profession. A study from Iran commented that depending on the country's university entry processes, it may be a career that is chosen for them and not one that they choose themselves.<sup>21</sup>

There are no studies recording the motivations of midwifery students in the Pacific region. Therefore, the aim of this study was to examine the motivation of students to study midwifery. This was part of a wider descriptive study of the experiences of midwifery students and graduate midwives in PNG. Ethics clearance was granted by the PNG Medical Research Advisory Committee (numbers 11.36 and 14.18) and UTS HREC (number 2012000065).

## **METHODS**

### **Setting**

Currently in PNG, the Bachelor of Midwifery degree is a 12-month postgraduate qualification offered through five university-based schools. The program is available for both men and women who have completed at least two years of general nursing after gaining their initial Registered Nurse qualification. Participants who commenced their training in 2012-2014 were contacted from the four midwifery schools that were operational at that time.

**Table 1.** Themes and subthemes

Themes	Number of responses	Total responses (%)
<b>Recognising a public need</b>		
Wanting to tackle the high maternal mortality	101	41.0
Wanting to serve women and improve maternal and child health care	43	17.5
Sub Total	<b>144</b>	<b>58</b>
<b>Recognising professional needs</b>		
Needing to improve midwifery skills and knowledge	41	16.6
Being aware of the shortage of midwives	17	6.9
Sub Total	<b>58</b>	<b>24</b>
<b>Building upon experience</b>		
Having an interest and/or experience in maternal and child health	44	17.9
Sub Total§	<b>44</b>	<b>18</b>
<b>Total</b>	<b>246</b>	<b>100</b>

§Sub-totals are rounded

**Data collection and analysis**

Towards the end of their course, 298 midwifery students over three cohorts spanning 2012-2014, were surveyed and 25 students were also interviewed from the 2014 cohort about aspects of their midwifery studies. As part of the survey and interview, students were asked to describe their motivation to become a midwife with the question: *why did you choose to study midwifery?* Transcription data from the interviews and survey data related to this question were analysed using content and thematic analysis.

**RESULTS**

A hundred and ninety-four students completed the survey and each gave between 1-3 different responses for choosing midwifery, making a total of 246 responses (65% response rate). Prior to studying midwifery, participants were working in a variety of settings, 39 of whom were employed in senior in-charge roles and six as educators. All but one respondent was female.

Three main themes emerged which were *recognising a public need*, *recognising professional needs*, and *building upon experience* (see Table 1). The sub-themes indicated that 41% of respondents studied midwifery because they wanted to help address the high maternal mortality in the country (see Table 2). This was followed by having an interest and/or experience in maternal and child health, wanting to serve women and improve maternal and child

health and the need to improve midwifery skills and knowledge. Students also stated that the shortage of midwives in PNG was a factor in their decision to study midwifery.

**Table 2.** Ranking of sub-themes by number of responses

Sub-theme	Number of responses
Wanting to tackle the high maternal mortality	101
Having an interest and/or experience in maternal and child health	44
Wanting to serve women and improve maternal and child health care	43
Needing to improve midwifery skills and knowledge	41
Being aware of a shortage of midwives	17

**Recognising a public need**

Midwifery students recognised the *public need* for improved care for childbearing women. This was expressed in various ways although all recognised that the level of maternal health was poor. The majority of responses (58%) indicated that they chose to study midwifery as recognition of the public need for health care for

women in particular. The central motivation within this theme was altruistic with an outward looking emphasis; students saw the needs within the community and were motivated to become midwives in response. Responses within this theme were further categorised into two sub-themes.

### ***Wanting to address the high maternal mortality***

Maternal mortality in PNG is extremely high and impossible to ignore, especially by nurses working in the health system. All members of the community are affected by this but the burden falls largely on women living in rural areas. Concern about the number of women dying in PNG was the single major motivating factor for the participants, making it the largest sub-theme with 41% responses (n=101). For example, four participants stated:

*"The maternal death rate is very high and I want to be part of the health team to help reduce this."*

*"Because many mothers are dying from preventable causes"*

Maternal mortality ratios read as statistics can diminish the horror of the lived reality for many health workers globally. Watching women die in childbirth is a distressing event that affects both family members and health workers deeply. Many of the participants had first-hand experience or some exposure to maternal death. Nine participants cited that being directly involved in a maternal death was their motivating factor for commencing midwifery studies; such was the impact of this experience, these participants decided to pursue midwifery in order to develop the skills to prevent further deaths from occurring. Some reported that women died in front of them and they did not know how to save their lives. Some of the responses included:

*"I came across mothers who died of complication(s) which I tried to do all that I can to save them but did not have the knowledge and skills".*

*"I saw (that) many mothers died just from being pregnant, delivery and after birth".*

Other responses in this sub-theme outlined components of workforce and geographical isolation as reasons for the high maternal mortality rate. Participants acknowledged that an increased number of midwives were required in rural areas in order to save lives. It was recognised that RNs lacked the necessary skills

to save lives and needed to be trained as midwives; they could see that having staff with appropriate skills would reduce the number of transfers and thus minimise delays, reduce costs and save lives. Participants expressed this by writing:

*"I work in a rural isolated area where most emergencies are obstetric"*

*"...so many times we have to refer complications to better/bigger hospitals - mothers die in the process, so the knowledge gained here will help me or enable me to help the dying/needy women out there"*

### ***Needing to serve women and improve maternal and child health care***

Some participants expressed a particular desire to assist women in specific ways. Many lived amongst women and their families in rural areas and felt a strong connection with the community they served. Being a midwife was seen as providing them with important skills. For example, one participant said:

*"...so I can go back and help mothers to have clean and safe supervised deliveries".*

In particular, disadvantaged women were mentioned, with participants saying that they wanted to be midwives:

*"To serve the poor and suffering ones in PNG"*

*"Because I want to work with mothers, help them in times when they are depressed, encounter problems in their life."*

A number of participants spoke more broadly about the need for maternal and child health care to be improved at facility, community, provincial and national levels. Others acknowledged that the midwives' poor attitudes toward women contributed to mortality and morbidity as women were less encouraged to attend health facilities. They said:

*"To teach the midwifery program to reduce MMR [maternal mortality ratio] and IMR [infant mortality ratio] due to poor attitude of health staff"*

*"We need to really change our attitudes towards the mothers that are coming in to labour here"*

The theme of *recognising a public need* comprised 'wanting to tackle the high maternal mortality' and 'wanting to serve women and improve maternal and child health care'. The majority of participants expressed that their

reason for studying midwifery was due to their recognition of these pressing public needs.

### **Recognising professional needs**

*Recognising professional needs* focused on how these nurses chose to increase their skills and knowledge in maternal and child health and address midwifery workforce shortages.

#### ***Needing to improve midwifery skills and knowledge***

Twenty-nine participants commented on their desire to further their skills, representing the second largest group of responses. These responses were often related to having been in situations where specific midwifery skills could have improved maternal or neonatal outcomes. Some of the students said:

*"Because working with mothers and children all the time, I wanted to have a broader knowledge in midwifery to work well and competently".*

*"Many times, I have not been able to provide better care to my patients especially mothers and babies due to the lack of knowledge that I have".*

It is significant that students acknowledged that prior to studying midwifery they faced situations where they felt that they did not have the knowledge, skills or attitudes required. Recognition of their ongoing education needs could be targeted to recruit nurses to study midwifery.

#### ***Being aware of the shortage of midwives***

Many health centres, particularly in rural areas, have no midwives at all, yet this is where many obstetric emergencies occur. Awareness of a shortage of midwives was a common finding. Participants who commented on this issue were from both rural and urban areas and their comments reflected upon either the lack of midwives or the lack of services for women in their location of origin. Two participants said:

*"I chose midwifery because there is a desperate need in my health facility and I was the only nursing officer in the health centre".*

*"I saw the need for more midwives as there was one midwife looking after about 11,000 people."*

Some respondents reported that they had seen the shortage of midwives lead to less than adequate care and this was what motivated them to become midwives. One participant said:

*"Because at my work place there are only 3 midwives and they are seen to over work most of*

*the time and at times due to this they mismanage complicated cases"*

Twenty-four percent of participants stated that they chose midwifery due to their recognition of the needs of the profession in PNG. These included the necessity to improve knowledge and skills and increase the numbers of midwives in the workforce.

### **Building upon experience**

Thirty-four participants either had experience in reproductive, maternal or newborn health, or had a strong interest in the field. Those with previous experience had worked within labour wards, gynaecology units, in the community and within nursing and midwifery schools. By choosing to study midwifery, participants identified that they wanted to build upon their existing experience.

#### ***Having an interest and/or experience in maternal and child health***

Twenty of the respondents stated that they had an interest in the field of midwifery. Many participants in this theme stated that they had been working in SRMNCH for varying periods of time, and saw the need to improve their knowledge and skills by studying midwifery. Some participants stated:

*"... this is where my interest is as I worked in labour ward"*

*"I served for more than 10 years in [an] obstetric ward and enjoyed it"*

A smaller number of respondents (n=6) were already teaching midwifery and neonatal health yet had no formal qualification in the discipline. They commenced their studies in order to feel qualified to teach others. The participants expressed:

*"As a supervisor I need to know the skills and assist those in the clinical setting"*

*"To upgrade my skills to be able to supervise/teach the required course"*

These participants felt it was necessary to study midwifery to formalise their clinical skills and knowledge, and increase their ability to work and teach the discipline effectively.

## **DISCUSSION**

The aim of this paper was to examine the motivation of students to study midwifery in PNG as this is important for longer term

midwifery workforce recruitment. Themes from the data included *recognising a public need*, *recognising professional needs*, and *building upon experience*. Data were collected by survey from midwifery students from four schools of midwifery in PNG in 2012-2014, and through additional interviews with some of the 2014 cohort, and as such the findings cannot be generalised to other areas although there will be resonances with similar countries in the region.

Almost half of the participants chose to study midwifery because they were aware of, or had direct involvement in a maternal death, and wanted to learn how to help prevent maternal mortality. This altruistic motivation is a unique finding. Other studies of motivations to study midwifery include those from the UK where students chose midwifery because they had a personal interest in childbirth and wanted to make a difference to women,<sup>13, 16</sup> and the United States where the students stated their interest in maternity care as a reason.<sup>15</sup> In contrast, results from Happel, in Australia,<sup>11</sup> showed that students chose midwifery as they perceived birth as a happy occasion that they wanted to be part of. Our study was significant in its lack of emphasis on happiness around childbirth. It is poignant that no other literature canvassing students' motives for choosing midwifery expressed maternal mortality as a reason.

The results of this study are directly due to the students' personal and professional experiences with maternal mortality in PNG. The maternal mortality ratio in PNG is 733 per 100,000 women,<sup>4</sup> which is one of the highest in the world, although data collection methods are unreliable.<sup>22</sup> PNG has not met the 2015 Millennium Development Goals directive to reduce maternal and child death rates by two-thirds, due to many interconnected reasons that contribute to the poor state of maternal and child health. These social or cultural problems are difficult to solve because of: incomplete/contradictory knowledge, numbers of people and opinions involved, financial burden, and the interrelated nature of the problem with other problems.<sup>23</sup>

There is little financial incentive to become a midwife in PNG, although as part of the aid provided by the Australian Government to rapidly improve numbers of midwives, scholarships have been offered to midwifery students. None of the participants in this study noted the availability of a scholarship or remuneration as reasons for them choosing to study midwifery. Instead, the answers were

overwhelmingly altruistic although probably the presence of a scholarship opportunity was enabling. This is in contrast to studies from Norway<sup>13</sup>, and in the UK<sup>14</sup>, where salary was a factor in students' reasons for choosing midwifery, although these are vastly different contexts to PNG.

Many participants were acutely aware of the shortage of skilled midwifery care in their country, and stated this as a reason that they chose to become midwives. Presently the ratio of midwives to pregnant women in PNG is 1:1000 which is well below the recommended level of 6:1000, and overall there is approximately a 50% unmet need for midwives in PNG.<sup>6</sup> To combat this, midwifery education in PNG is currently being enhanced through the Maternal Child Health Initiative, an Australian Government funded program<sup>24</sup> with the PNG National Department of Health. This has involved recruiting 11 international Clinical Midwifery Facilitators to work alongside existing personnel at each of the midwifery schools and associated clinical placement sites, two obstetricians employed to support direct service delivery, and staff mentoring and training.

There are now five midwifery schools in PNG, and a growing momentum to build on the quality of ongoing training and development. Currently these schools offer a 12-month course for nurses and an 18-month program aligned with international standards has recently been developed. There is evidence from other low to middle income countries to suggest that a 3-year direct-entry Bachelor of Midwifery course, where it is not a pre-requisite for students to be a nurse may be a solution to workforce shortages.<sup>6</sup> This may also impact maternal mortality. For example, the impact of the 2013 direct-entry midwifery program in Bangladesh, in terms of lives and life years saved over a 30-year career span, was estimated to result in 36,000 lives saved.<sup>6</sup> A similar direct-entry midwifery program in PNG would have a similar effect of significantly boosting the midwifery numbers and it would also ensure that the quality and numbers of the nursing workforce are maintained for nursing duties.

Limitations of this study include the small sample size and a lack of specific demographic data about the participants. While the sample size is small, it is representative of the midwifery students during this time period as 65% of students responded to this question. It would have been interesting to know whether the broad altruistic reasons were similar between



students from rural areas compared with urban settings but this information was not collected in these data. The responses were also limited to the one question and the responses may not have been in-depth. Interviews with all the students may have elicited more detailed information about their motivations. Nonetheless, these brief written responses are a sombre reminder of the reality facing nurses and midwives in PNG.

## CONCLUSION

The majority of students chose to study midwifery as they recognised a public need for health care for women. Many indicated that they wanted to help reduce the high maternal mortality. This is a unique finding reflecting the dire state of maternal and child health in PNG and is of great contrast to the motivations of midwifery students in developed countries. Midwives are an essential part of PNG's fight against maternal and newborn mortality and morbidity and it is vital to attract midwifery students to increase midwifery numbers and the capacity of PNG to improve SRMNCH.

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## Competing interests

There are no competing interests.

## Author contributions

Alison Moores drafted and edited the manuscript and lead the data analysis, Christine Catling helped write the paper and analyse the data, Florence West provided editing advice and assisted with writing the manuscript, Amanda Neill collected the data and provided help with analysis, Michele Rumsey assisted with data collection and editing, Mary K Samor is principal PNG counterpart for evaluation of MCHI, assisted with access to students and data collection, contributed to final analysis and report and Caroline S.E. Homer conceived the research question and assisted with writing the manuscript.

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