

QUIP Report on effect of the Aga Khan University BSc Midwifery degree on the lives of graduate midwives in Uganda



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GLOSSARY OF KEY TERMS

Qualitative Impact Protocol (QuIP) studies aim to use the following terms consistently.

Attribution: Evidence that an action (X) of a named organisation or project is contributing to change in an outcome (Y) in the presence of other drivers of change (Z).

Attribution code: A code that indicates whether a causal claim is: a) having a positive, negative or neutral effect on a specified outcome, and b) explicitly identifies a selected organisation as the driver of change, is implicitly consistent with its theory of change or is unrelated/incidental to its actions.

Causal claim: A proposition that a specified outcome (Y) was a direct consequence of specified actions (X) or (Z).
Causal driver: See driver of change.

Citation count: The number of times an outcome, driver of change or casual claim is cited across the data set, with a maximum of one count per respondent per domain. This comes to a theoretical maximum of 98 (made up of 14 respondents across seven coded domains: $14 \times 7 = 98$).

Citation intensity: The mean number of citations of a coded driver, causal claim or outcome per respondent. Hence, if C is the citation count, R is the respondent count and I is the citation intensity; then $I = C/R$.

Commissioner: The organisation contracting a QuIP study and primary user of the evidence to be collected. Responsibility rests with them to decide what sort of evidence they want, as well as when, where, how and why to collect it.

Credible causation: X credibly causes Y in a particular context if: a) there is strong evidence that X and Y happened, b) several stakeholders independently assert that X was a cause of Y with minimal prompting, c) there is no more credible counter-explanation for why this might have been said and d) their account of how X caused Y is consistent with a plausible theory of change.

Domain: A field or category of outcomes agreed in advance with the commissioner and used to structure interviews and focus group discussions. Most studies address a set or group of domains that are consistent with a theory of change. For example, they may refer to different aspects of the wellbeing of individual intended beneficiaries.

Driver of change: An action or state (X or Z) behind an outcome (Y). These are generally self-reported by respondents in answer to questions such as 'why did that happen?' or 'what was the reason for that?' This term is synonymous with causal driver. Thematic coding is used to gather similar drivers into groups or clusters.

Intended beneficiary: Those people that a specified organisation is aiming to benefit by achieving outcomes specified in its theory of change. In the case of capacity building projects, intended beneficiaries may be organisations or associations of people.

Impact: Evidence that a specified project credibly caused a specified set of outcomes. In some cases, the term 'impact' may refer specifically to final or tertiary outcomes.

Outcomes: Changes (positive or negative) reported by respondents, often in answer to the question 'during the last [specified time period] has anything changed in relation to [domain]?' As outcomes can also become drivers of change, we code primary, secondary and tertiary outcomes if required. For example, X may lead to Y1 leading to Y2 leading to Y3. In this case, Y1 and Y2 are both drivers of change and outcomes (primary and secondary). These intermediate outcomes may also be referred to as outputs or results, but these terms are generally avoided in QuIP studies.

Project: A specified set of activities, interventions or investments over a given period of time aimed at achieving a specified set of intended outcomes for a specified group of intended beneficiaries. This is the object of a specified QuIP study, and it is the commissioner's responsibility to define both it and the underlying theory of change as precisely as possible. Others may refer to the project as a 'treatment', but this term is generally avoided in QuIP studies.

Respondents: These are the main source of causal claims, linking drivers of change (including, but not limited to project activities) to outcomes, both intended and unintended. Respondents are usually a sample of intended beneficiaries, and data are collected through a mix of semi-structured interviews and focus group discussions.

Respondent Count: One count per interview, to a maximum of 14 in this study.

Theory of change: The causal processes by which the commissioner of a QuIP study expects a specified project to achieve intended outcomes and impact. Not all causal drivers originate with the project. Theories of change also identify incidental drivers of change and may assess the risks associated with their occurrence or non-occurrence.

GLOSSARY OF TERMS AND ABBREVIATIONS

AKDN	Aga Khan Development Network
AKU	Aga Khan University
BScM	Bachelor of Science in Midwifery
BSDR	Bath Social and Development Research
QoL	Quality of Life
QuIP	Qualitative Impact Protocol
ToC	Theory of Change

NOTE REGARDING RESPONDENT DATA

The QuIP interviews were conducted in English and the field researchers wrote up verbatim responses. Any quotations from respondents used in the report reflect the English used by the field team. The questionnaires were anonymised, and each respondent given a code. The respondent's code and relevant question number are cited each time an extract is used (for example, 'EON-1: C1', would mean respondent EON-1, question C1). Original recordings and notes are held by the field researchers.

BATH FOREWORD

Bath Social & Development Research Unit (BSDR) was commissioned to undertake an independent evaluation of the BScM degree programme at the Aga Khan University School of Nursing and Midwifery (AKU-SONAM) in Uganda. The evaluation focused on the impact of the programme on the quality of life (QoL) of the first unit of students to graduate in 2017. The aim of the study was to help AKU-SONAM understand more about drivers of change, both positive and negative, for use in the development of midwifery programmes in the future.

At BSDR, our objective is to assist development organisations in collecting and evaluating their multidimensional social and development impacts. We applied the Qualitative Impact Protocol (QuIP) methodology to AKU-SONAM evaluation. We have curated the development of the QuIP since its initial development at the Centre for Development Studies, University of Bath and continue to cultivate and foster the growth of the approach outside of BSDR.

QuIP provides a framework for collecting and analysing self-reported change stories from respondents to understand what affects and effects change in different contexts, and how people experience change in different ways. Trained interviewers are informed as little as possible about the organization whose impact is being assessed, in order to reduce bias. The precise intention of the QuIP methodology is to create a credible way to assess the impact of interventions in varied socioeconomic contexts.

This AKU-SONAM evaluation was a small study, making it hard to generalise findings across a broader population, but within this specific cohort it provided an opportunity to delve more deeply into graduates' experiences, both personal and common. In the broadest and most comprehensive terms, the study shows that completing a BScM degree from AKU-SONAM positively impacts the lives of the participants in both personal and professional capacities, irrespective of age, years of practice in their fields, or distance from the University.

We would like to extend a heartfelt thank you to everyone who participated in this project, including the respondents from the 2017 cohort of midwives, AKDN Quality of Life Unit, led by Marc Theuss, Professor Grace Edwards, and Professor Sharon Brownie.

We are thrilled to share this study with you!



A handwritten signature in blue ink, appearing to read 'G Davies'.

Dr. Gabby Davies
Senior Project Manager,
BSDR



A handwritten signature in black ink, appearing to read 'Eva Burke'.

Eva Burke
Independent Consultant



A handwritten signature in black ink, appearing to read 'Fiona Remnant'.

Fiona Remnant
Director, BSDR

AKDN FOREWORD

Uganda's maternal mortality rate has reduced by an average of just over 3% per year since 1990; however, the rate remains unacceptably high. Uganda has a young population; women of reproductive age account for 22 per cent of the population, and the total fertility rate is 5.6 births per woman. By 2030, the population is estimated to increase by 59%. Thus, the education of skilled, high-quality midwives is essential to accelerate improvements in maternal and infant mortality in Uganda and work toward universal healthcare coverage.

Since 2001, the Aga Khan University School of Nursing and Midwifery (AKU-SONAM) East Africa has offered a work/study programme to help registered nurses upgrade their qualifications to degree level while continuing to work in their clinical areas and support their families. In 2015, the first Bachelor of Science in Midwifery (BScM) degree programme was offered to registered midwives in Uganda. The first cohort of 15 midwives graduated in 2017.

AKU-SONAM engages in formal processes of programme measurement and evaluation as part of the School's quality mandate. This innovative, independent study was initiated as part of a commitment to offering high-quality, culturally relevant education for midwives. The study comprises a unique partnership-based research evaluation utilizing QuIP (Qualitative Impact Protocol) methodology to examine the impact of our BScM programme in the lives of the inaugural midwifery class in Uganda.

AKU-SONAM is delighted to have partnered with the Aga Khan Development Network's Quality of Life (QoL) Unit Monitoring, Evaluation and Research Support Unit and external specialists from the Bath Social Development and Research Unit (BSDR) to trial the QuIP methodology as a way of learning about the most significant drivers of change in the lives of our first cohort of midwives.

We are humbled to see that the students' experiences were overwhelmingly positive, with students citing improved technical knowledge and professional skills, increased professional and personal confidence, increased resilience and improved career prospects as a direct result of completing our programme. We are proud of their achievements and excited to share the results of this study with you.



Grace Edwards
Professor, Midwifery
Education & Practice



Sharon Brownie
Professor, Health
Workforce Development



Marc Theuss
Director, AKDN Quality
of Life Unit

EXECUTIVE SUMMARY



This Qualitative Impact Protocol (QuIP) study was commissioned by the Aga Khan University (AKU). The study aimed to independently assess the impact of the work/study Bachelor of Science in Midwifery (BScM) degree programme at AKU in Uganda on the quality of life (QoL) of the first cohort of midwives to graduate from the course in 2017. The objectives of this study were to: 1) investigate changes in the QoL of this cohort of students; 2) assess the impact of the work/study programme on the students' lives; and 3) provide insight to stakeholders about the benefits and challenges of this programme. This report therefore provides an overview of reported changes in the lives of the respondents that can be used to inform future strategies for the BScM programme.

Using QuIP methodology and a qualitative evaluation tool, individual interviews with 14 of the 15 graduate midwives were conducted in May 2018 by a research team in Uganda. The interviews sought to capture changes across seven domains in respondents' lives:

- Work roles
- Professional skills
- Confidence in their role
- Professional relationships
- Personal relationships
- Wellbeing
- Career prospects and aspirations for the future

The interview transcripts were systematically coded and analysed to capture positive and negative changes, the drivers behind these changes and how far the changes were related to the BScM programme. Following the interview phase, a WhatsApp group discussion including the 14 participating midwives and two field researchers was set up to give midwives a platform to share experiences, best practices, successes and challenges related to their daily work, and allow the research team to gain more insights into the daily experiences of participating midwives and inform the future content of the BScM programme. The group was observed during a period of 3 weeks in June 2018 and extracts of annotated WhatsApp discussions were shared with the research team for thematic analysis.

The key headline from this QuIP study is that undertaking a degree in midwifery at AKU significantly positively impacted the lives of graduate midwives both personally and professionally in a variety of different ways. There were no discernible differences in the reported changes among the midwives in terms of their years of practice, age or distance from AKU, indicating that the BScM programme positively affected the whole cohort in equal measure.

The data show that the graduate midwives reported predominantly positive changes over the past year across all domains, as well as a few negative changes. These changes are illustrated in the heat maps below (Figures 1 and 2; note the much smaller numbers for the negative responses in Figure 2).

Figure 1: Main positive changes

Increased skills and knowledge 81 (14)	Improved ability to perform work duties 40 (14)	More respect from colleagues 26 (12)	Colleagues consult midwife for advice/mentoring 25 (13)	Higher aspirations for the future/ increased determination to advance career 24 (14)
	Improved communication skills 28 (12)	Improved working relationships with colleagues 22 (12)	Peer support, advice and discussion 21 (12)	More career opportunities available 20 (12)
Increased confidence/ sense of self-worth 47 (14)	Improved quality of patient care 28 (13)	Practice patient-centred care 22 (10)	More confident interacting with colleagues 21 (11)	Deeper commitment and interest in midwifery 19 (9)
				Obtained more senior/better paying job 19 (8)

Figure 2: Main negative changes

Co-workers feel threatened by degree qualification 12 (10)	Increased workload 10 (10)	Trying to hold down two jobs simultaneously 4 (4)	Increased competition among midwives for jobs 3 (3)
	Unable to treat patients effectively 7 (5)	Increased levels of stress 3 (3)	No income increase despite degree qualification 3 (3)
Resentment from colleagues 11 (10)	Spending less time at home 6 (6)	Unable to apply for jobs/further study 3 (3)	Increased pressure to earn more money 3 (2)

Note: The values below the descriptions refer to the number of respondents who reported the outcome; one unique count per respondent per domain out of a theoretical maximum of 98 across the data set. Numbers in parentheses denote total number of respondents citing that outcome (out of a possible 14). Box size and colour denote the frequency of outcomes reported, with larger boxes revealing the most commonly cited outcomes.

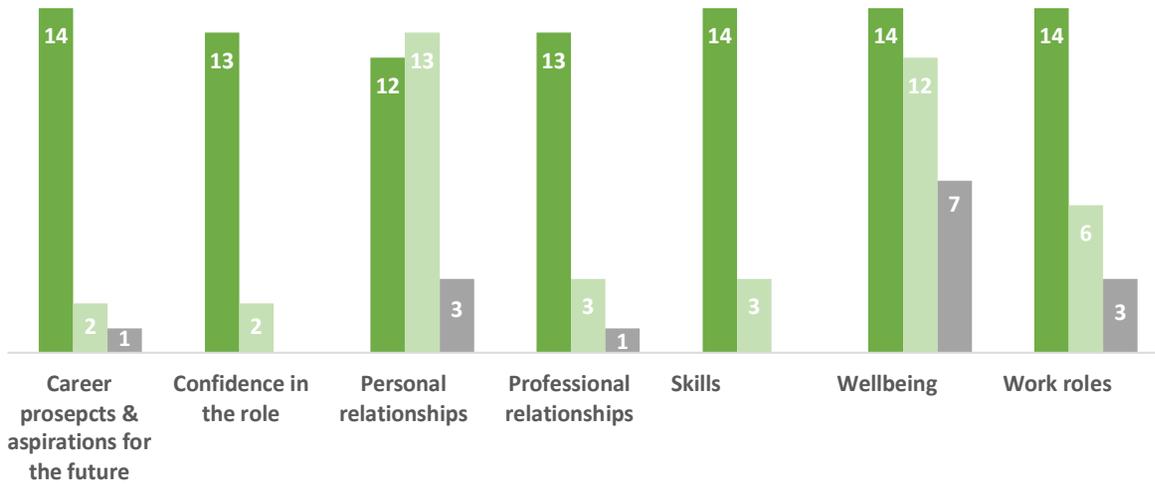


A limited amount of negative change was attributed to AKU. However, in contrast, nearly all positive change was either directly or indirectly attributed to AKU, as shown in the column chart below (Figure 3).

Figure 3: Chart showing frequency of positive attribution across domains

Positive attribution across domains

■ Explicit attribution to AKU Uganda BSc Midwifery degree ■ Implicit attribution to AKU Uganda BSc Midwifery degree
 ■ Attributed to other sources



The key drivers of positive changes were graduating with a degree from AKU (cited 84 times by the 14 respondents across the data set) and receiving training from AKU (cited 64 times by 13 respondents). These two drivers promoted a variety of positive changes across the data set in all domains, as illustrated by the network diagrams in Figures 4 and 5.



Figure 4: Positive changes driven by graduating from AKU

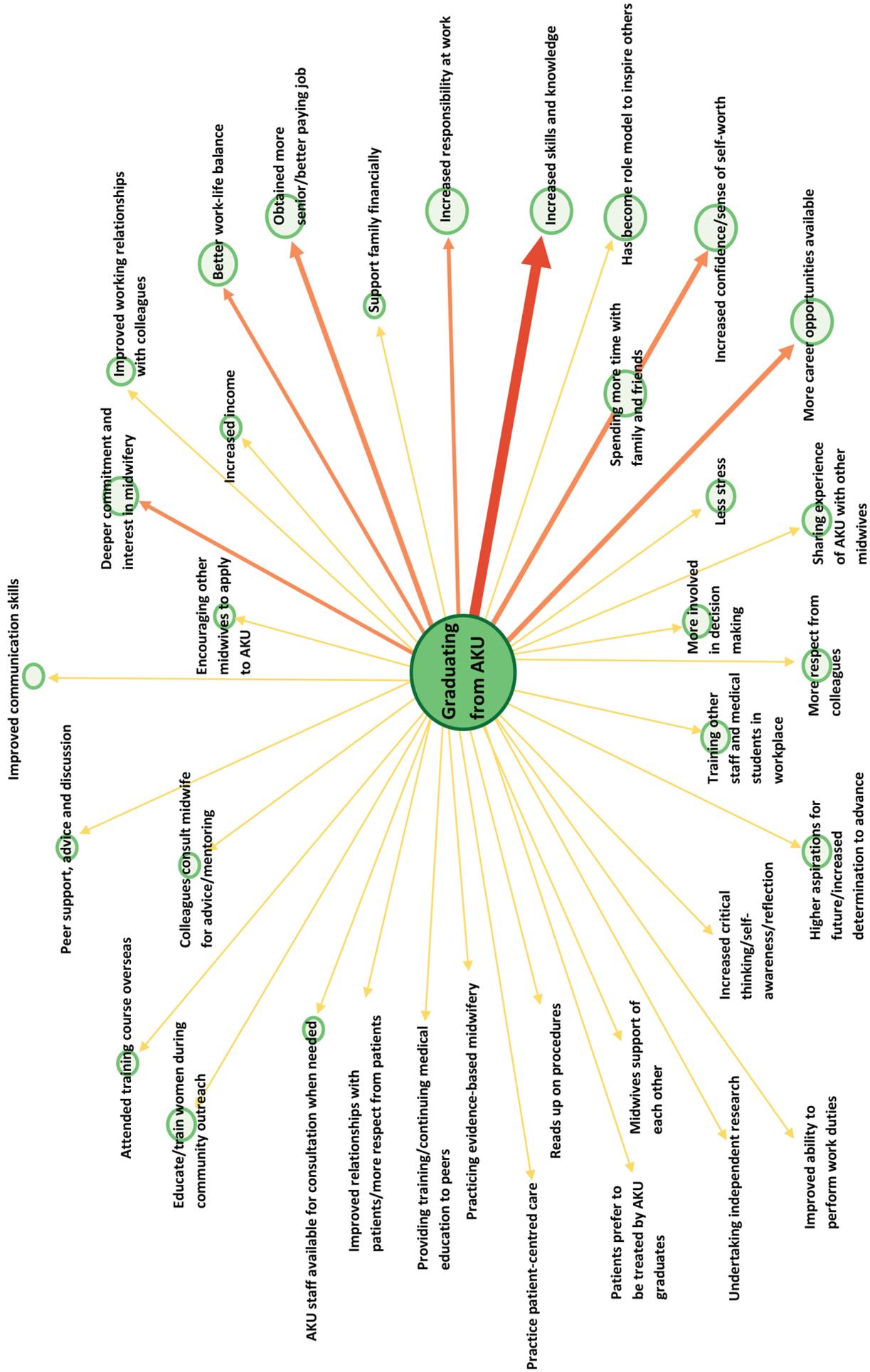
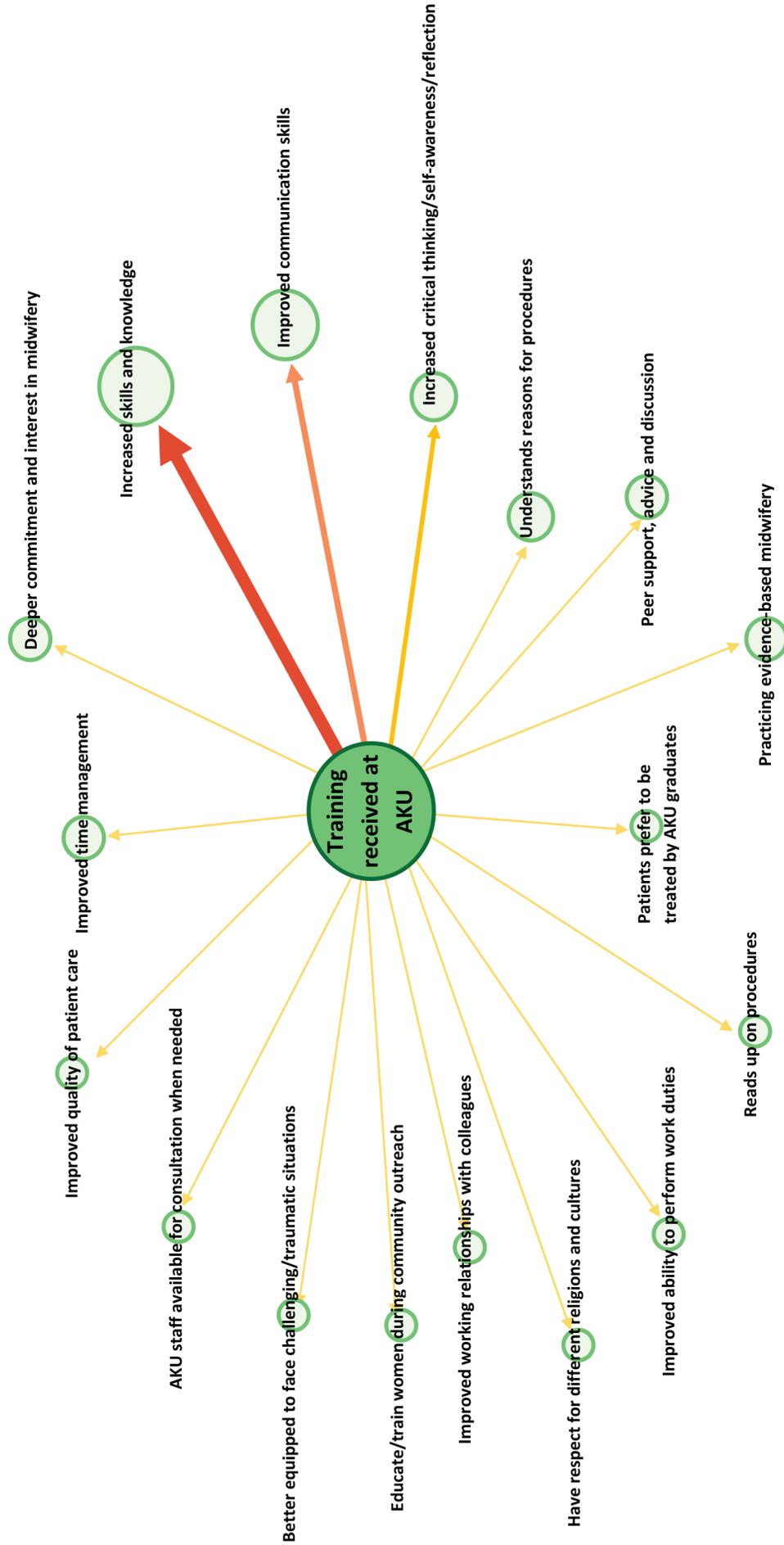


Figure 5: First-level outcomes driven by receiving training from AKU



The most significant story of change running through the data set and across all domains was how undertaking the BScM had increased respondents' skills and knowledge, leading to overall improvement in the way that they performed their professional practice. This broad story of change can be broken down into a variety of interwoven component parts that include:

- Improved ability to undertake day-to-day work by practising evidence-based midwifery
- Increased confidence in clinical decision-making and voicing their medical opinion, resulting in midwives being more assertive in making themselves heard within clinical settings and increased confidence interacting with colleagues
- Greater respect from colleagues, linked to being consulted for advice on patient treatment, training medics and students in the workplace and better working relationships
- Better communication skills resulting in midwives practicing patient-centred care and fully engaging with their patients as individuals, leading to improved relationships with patients and better care overall
- Increased confidence, self-assurance and self-belief in all areas of life, but particularly professional practice
- Greater self-awareness and enhancement of critical thinking skills positively affecting midwives' work and home lives
- Improved ability to handle stress and deal with challenging and traumatic situations
- Increased commitment to continuing medical education and midwifery as a profession
- More career opportunities available to graduate midwives
- Higher aspirations for the future, including undertaking post-graduate study and a strong determination to progress in their chosen careers.

A significant story of positive change was that graduate midwives had created their own community of practice via WhatsApp (this was prior to the group set up for the purposes of the QuIP study) to support each other professionally and personally. Using this forum, the midwives could share knowledge, consult and advise on clinical situations, promote job opportunities and encourage and nurture each other.

On the negative side, two key stories of change that were indirectly attributable to graduation were reported:

- Increased levels of resentment and jealousy from less well-qualified colleagues leading to a deterioration of professional relationships, with graduate midwives being unable to delegate work and therefore having an increased burden of work placed on their shoulders
- Being in debt from AKU tuition fees resulting in graduate midwives not seeing short-term increases in income despite higher paying jobs, having to work more than one job to make ends meet or being unable to apply for new jobs as their transcripts/certificates had not been released because they had not paid all of their fees.

A more general negative story was the lack of resources and staff throughout the healthcare system in Uganda, which negatively affected the midwives' ability to undertake their jobs effectively.

Conclusion

Overall, this QuIP study found evidence to support the theory of change relating to AKU BScM. The findings demonstrate that AKU BScM positively affected the lives and wellbeing of the 14 graduate midwives interviewed. Completing the degree led to a significant improvement in graduates' personal development and professional practice.

OUTLINE OF THE REPORT



This report comprises seven sections.

- **Section 1** gives a brief introduction to the QuIP purpose and approach before moving on to document the background of AKU BScM training programme.
- **Section 2** outlines the QuIP methodology.
- **Section 3** provides a broad snapshot of respondent's perceived change across all domains based on closed questions asked during each interview.
- **Section 4** presents the main findings of the study, supported by a variety of data visualisations and illustrative quotes from the interviews.
- **Section 5** reflects on some of the limitations of the study and lessons learned.
- **Section 6** provides a discussion, summarises the key findings and revisits how they respond to the evaluation questions driving the QuIP study before finishing with a brief conclusion.
- **Section 7** includes a range of Appendices relevant to the study.

Please note that primary sources are cited using standard identification codes for interviewees, which also enable readers to refer directly to narrative summaries of what respondents said. These are reproduced in a separate Annex (coded transcripts), sorted by impact domain and attribution code.

INTRODUCTION



This report summarises the findings from the Qualitative Impact Protocol (QuIP) study commissioned by the Aga Khan University (AKU), which sought to provide independent evidence of the impact of the work/study Bachelor of Science in Midwifery (BScM) programme that was completed in Kampala, Uganda in 2017. The main aim of the evaluation was to determine the impact of completing the BScM on the quality of life (QoL) of the graduating midwives.

The objectives of this study were:

1. To investigate changes in the QoL of this cohort of students.
2. To assess the impact of the work/study programme on students' lives.
3. To provide insight to stakeholders about the benefits and challenges of this programme.

The data presented in this report aimed to answer five questions:

1. Have there been any changes in the midwives' roles and responsibilities, skills, confidence in their role, professional and personal relationships, wellbeing, career prospects and aspirations for the future over the last 2 years?
2. Are these changes for the better or worse?
3. Are these changes in any way linked to having completed the BScM programme, or incidental to it?
4. What are the drivers behind the changes cited by respondents?
5. What are the relationships between the drivers of change, outcomes and the BScM programme?

To determine the impact of the BScM programme on respondents' QoL, interviews were conducted with 14 of the 15 midwives who graduated in the first BScM cohort. These 14 midwives were based in four locations in Uganda at the time of the study: Kampala (10 midwives), Jinja (two midwives), Mpigi (one midwife) and Kaliro (one midwife), illustrated in the map below (Figure 6).

Figure 6: Map of Uganda with fieldwork sites marked



A semi-structured questionnaire designed to capture changes in seven main domains of respondents' lives was administered in interviews with the participating midwives during May 2018. The interviews were conducted by a local research team trained in QuIP methodology. The domains covered were:

- Work roles
- Professional skills
- Confidence in their role
- Professional relationships
- Personal relationships
- Wellbeing
- Career prospects and aspirations for the future.

QuIP methodology focuses on gathering stories of significant change and what respondents cite as the key drivers of those changes. This enables readers to understand how closely the reported drivers of change correlate with the intervention's planned theory of change (ToC), and the extent to which the reported outcomes and impacts are attributable to the intervention. By presenting these data in an accessible form, the study aimed to provide useful information that can be used to improve programme strategies, approaches and future interventions.

Following the interview stage, a QuIP study WhatsApp group was set up for the 14 midwives to provide insights into their daily experiences and inform the future content of AKU BScM programme to better support midwives. WhatsApp exchanges were observed by the research team over a 3-week period.

Background

Uganda had an estimated population of over 41 million in 2016¹, with a high fertility rate (5.6 births per woman) and an adolescent birth rate of 140 per 1,000 girls aged 15–19 years². Nearly half of the population is aged below 15 years³. These factors contribute to a rapidly increasing population, higher-risk pregnancies (especially among adolescents) and increasing pressure on the health system. Although maternal health-related indicators in Uganda have improved in recent years, they remain worryingly high.

- The maternal mortality rate decreased significantly in recent years, from 506 deaths per 100,000 live births in 2001 to 336 in 2017, with this attributed to the presence of midwives in health facilities⁴
- Under-5 mortality rates decreased from 170 deaths per 1,000 live births in 2000 to 53 in 2016; for neonates this decreased from 35 deaths per 1,000 live births in 2000 to 21 in 2017²
- Birth intervals of less than 24 months are associated with increased risk for maternal, infant and child mortality⁵, but the contraceptive prevalence rate in Uganda remains low (27 per cent), with over 33 per cent of women having an unmet need for contraception⁶
- Around 60 per cent of women attend at least four antenatal care sessions and 57 per cent of births are with skilled birth attendants².

Midwives play an essential role in protecting the health of mothers, neonates and infants through the provision of health services throughout pregnancy, birth, the postnatal period and in early childhood years. Their remit extends to health counselling, education and reproductive and sexual health services, including family planning. There are currently over 2.5 million pregnancies per year in Uganda; with population growth, this will rise to 3.4 million pregnancies per year by 2030⁸. Uganda has 0.648 nurses and midwives per 1000 population⁷, and only 0.35 obstetricians/gynaecologists per 100,000 women of reproductive age⁸; therefore, midwives are faced with heavy workloads and are unable to meet the demand for their services, especially in hard-to-reach areas where health services are scarce. Other challenges faced by midwives in Uganda include inadequate remuneration, poor working conditions, inadequate supplies and equipment in health facilities and limited opportunities for professional and career growth⁴.

¹<http://data.worldbank.org/country/uganda>

²<http://countdown2030.org/wp-content/uploads/2018/01/Uganda-CD2030.pdf>

³<http://www.who.int/countries/uga/en/>

⁴<http://uganda.unfpa.org/en/news/celebrating-ugandas-midwives-unfpa-pledges-continued-support-midwifery-services>

⁵World Health Organization (2007), Report of a WHO Technical Consultation on Birth Spacing, Geneva, Switzerland.

⁶<http://www.familyplanning2020.org/entities/80>

⁷<https://data.worldbank.org/indicator/SH.MED.NUMW.P3?locations=UG>

⁸United Nations Population Fund (2017), State of the World's Midwifery: analysis of the sexual, reproductive, maternal, new-born and adolescent health workforce in Eastern and Southern Africa. United Nations Population Fund, East and Southern Africa Regional Office.

AKU, a not-for-profit institution, is an agency of the Aga Khan Development Network (AKDN). The AKDN consists of institutions that collaborate for development in response to social, economic and cultural changes in specific regions of developing countries. The overall goal of the AKDN is the improvement of QoL in the areas where its member institutions work. AKDN's vision and strategies encompass improvement in material standards of living, health, education and a set of values and norms in the organisation of society. These include pluralism and cultural tolerance, gender and social equity, civil society organisation and good governance. AKU occupies a pivotal place in the AKDN, and contributes to social development in major ways. It prioritises higher education and research initiatives particularly relevant to low-income countries. In Kenya and Uganda, AKU School of Nursing and Midwifery offers a BScM as a work/study programme, allowing midwives and nurses that already have a diploma to remain at their workplaces while pursuing further professional development. Traditionally, access to career advancement for nurses and midwives working in low-income countries is difficult, if not impossible. Most midwives support families and do not have the flexibility or financial capability to attend full-time academic programmes. The work/study BScM programme aims to:

- Strengthen the health system
- Contribute to overall improvement of maternal and child health as well as improved maternal child health indicators through upgrading midwifery skills, improving the quality of care and developing leadership in midwifery practice.

The BScM is a new work/study programme, and the first cohort of 15 midwives graduated in 2017. The 2.5-year degree programme aims to prepare midwives to provide safe, competent, culturally responsive and quality care at all levels of the health system, and provide nurses and midwives with internationally-benchmarked quality education that is relevant, innovative, affordable and needs-based. The faculty are expert nurses and midwives, and the programme includes a combination of direct teaching (both clinical and theoretical) and self-directed learning. The curriculum includes midwifery courses and biomedical sciences, covering 16 different courses in total. The BScM provides evidence-based sessions with competent clinical teachers, exposure to complicated pregnancies with expert support, simulated experience and objective structured clinical examinations to check competence and application of knowledge. This provides midwives with the clinical knowledge and competencies needed to provide high-quality midwifery care and ultimately reduce maternal and perinatal mortality outcomes (see Appendix 1 for a detailed overview of the ToC). AKU alumni have gone on to hold leadership positions in hospitals, universities and colleges, government agencies, businesses and not-for-profit organisations.

AKU, AKDN Quality of Life Unit and Bath Social Development & Research (BSDR) Ltd. collaborated in this study to explore changes in the QoL of the first cohort of qualified midwives to complete the BScM in Uganda. The study is intended to provide a mechanism for midwives to reflect on their training in light of their transition back to full-time practice, timely feedback to inform future development of the programme and insights to other stakeholders as to the nature of this transition and how it can best be supported. The study explored changes in graduates' QoL as they progressed through their course and emerged as new BScM graduates.



Bogere Joy
Nursing Officer

MINISTRY

METHODOLOGY



This research was conducted using QuIP evaluation methodology⁹. This methodology is designed to collect credible information directly from intended beneficiaries on significant drivers of change in selected domains of their life over a pre-defined period of change. This methodology is particularly useful in complex contexts where a variety of factors that are hard to disentangle influence the outcomes of an intervention. Narrative data collected by local, independent field researchers are cross-analysed against the commissioner's project activities to identify both unexpected and anticipated drivers of change. This methodology does not require a baseline or control group, and as such can be used at any stage of the project cycle.

A key characteristic of the QuIP methodology is that the interviews are, as far as possible, 'blinded'; that is, the researchers conducting the interviews and the respondents themselves are not aware that the research is connected to the intervention. This blinding is intended to reduce pro-project and confirmation biases. In the case of this study, the research team and members of AKDN and AKU agreed during the study design phase that blinding was not an appropriate approach, as midwives needed to be informed about why they were being invited to participate in a study about aspects of their personal and professional lives, and provide consent for participation based on sufficient information about the study aims and objectives. The study sample included one cohort of graduates, and given the specificity of the group, unblinding the research team and participants regarding the identity of the commissioner of the study was considered the most ethical approach. Local ethics approval for the study was obtained from the Research Ethics Committee of Uganda.

Although the researchers had basic information about who had commissioned this study, the questionnaires used for data collection had no references to the BScM programme or AKU. This reflected a more 'typical' QuIP questionnaire, where questions were exploratory and open-ended. The open-ended nature of the questionnaire means that field researchers are generally able to collect a broad range of information about activities and drivers of change, as respondents are not limited to analysis of one intervention.

To minimise potential pro-project or confirmation bias, respondents were informed in all communications about the study (including consent forms) that their participation was entirely voluntary, the research was conducted by an independent research team and any information they shared would remain anonymous, including to AKU. By applying these measures, the research team aimed to create a safe environment for respondents to share their experiences and thus collect unbiased information.

The questionnaire was designed and the researchers trained to probe respondents with follow-up questions to establish what they perceived to be the reasons for any change cited. The resulting list of positive and negative drivers of change may help to establish which institutional interventions had the most effect, and what other factors may mitigate or aid their success. The questionnaire was used with a pre-selected sample of individuals and focus groups, as per the agreed sampling strategy. Individual interviews usually lasted 1–1.5 hours.

QuIP data are not statistically representative of the wider population. Findings cannot be extrapolated across wider project target areas, nor is that the intention. The aim of conducting a QuIP study is to conduct a 'deep dive' assessment with a purposively selected group of people in the project target area to understand whether (and if so, how) different aspects or 'domains' of respondents' lives have changed in recent years. In this study, given the relatively small number of midwives who were in the first cohort of BScM graduates, all 15 graduates were invited to participate in the study.

Analysis of respondent interviews began with systematic coding of responses to the open questions. Statements related to changes that the individual or focus group experienced were coded. A system of triple coding was developed whereby the analyst allocated a driver, an outcome and an attribution code to statements of change. To code attribution, a number from 1–9 (depending on what was said) was attributed to the statement. Table 1 provides an explanation of these codes.

⁹Further background and QuIP resources can be found at: www.bathsd.org and <http://qualitysocialimpact.org/resources/>

Table 1: Attribution coding

Attribution	Positive code	Negative code	Explanation
Explicit link to the AKU Uganda BScM programme	1	2	Positive or negative change explicitly attributed to AKU Uganda BScM or to explicitly named project activities or project partners.
Implicit link to the AKU Uganda BScM programme	3	4	Change confirming (positive) or challenging (negative) the specific mechanism (or theory of change) by which the project aims to achieve impact, but with no explicit reference to the project or named project activities.
Change attributed to other sources	5	6	Change attributed to other forces (not related to activities included in the project's theory of change).
Change not attributed to any source	7	8	Change not attributed to any source by the respondent
Neutral, but interesting	9		Responses that were felt to be of interest, not related to change.

The QuIP analysis methodology allowed the narrative information gathered from interviews to be coded and displayed in tables and visualisations. The codes used in the tables and quotations also enable readers to trace back to the original quote available in a separate document (please see the separate annex). These are organised according to impact domain and attribution code. For this QuIP study, quotations were predominantly based on verbatim transcripts written up by the field team, and the English has been deliberately left as written to maintain authenticity. Please note that this differs from usual QuIP practice, which is to summarise respondent responses.

Interviews and sampling strategy

The fieldwork for the BScM programme QuIP study was conducted in May 2018 by a local field team recruited and trained in QuIP methodology by BSDR. The field team was led by an experienced local qualitative researcher in collaboration with a local academic expert as a co-lead, and comprised two female researchers. The field team were tasked with collecting information on broad changes in respondents' QoL during the interviews and observations of the WhatsApp discussions. The field team piloted the questionnaire before field collection and made minor modifications to the questionnaire design as necessary to improve the data collection phase.

This QuIP study sought to establish what had changed in the areas of graduates' lives that were likely to have been impacted by completing the BScM programme. All interviews used a semi-structured interview format structured around relevant domains, with both open and closed questions. An example of the format used for the individual interviews is given in Appendix 4. Written informed consent was obtained at the beginning of the study. Respondents were also asked to sign a form on the WhatsApp terms and information.

Only one midwife from the cohort was unable to participate in the study, making the total sample size 14 respondents. Each respondent was allocated a respondent code to maintain anonymity. Respondent codes were based on years of practice, age and distance travelled to AKU to allow for data analysis by these different variables. Table 2 presents the respondent codes and Table 3 shows the variables that were used to differentiate respondent types.

Table 2: Respondent codes

AKU graduate midwife respondent codes			
More experienced, older midwife living <20km from AKU	More experienced, older midwife living <20km from AKU	Less experienced, younger midwife living >20km from AKU	Less experienced, younger midwife living >20km from AKU
EOF-1, EOF-2, EOF-3	EON-1, EON-2, EON-3, EON-4, EON-5	LYF-1, LYF-2	LYN-1, LYN-2, LYN-3, LYN-4

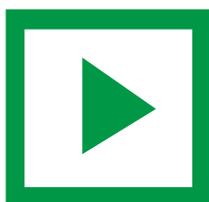
Table 3: Sampling variables

Sampling variables of AKU graduate midwives					
Years of experience before study		Age		Distance from AKU	
More than 9 years (E)	Less than 9 years (L)	Aged 35 years and over (O)	Aged under 35 years (Y)	More than 20 km (F)	Less than 20 km (N)

In addition to the individual interviews, a WhatsApp group discussion was set up for the QuIP study for all midwives who consented to participate and had access to a smartphone. At the end of their individual interviews, the field team explained the aims and practicalities of the WhatsApp group to respondents, and invited them to participate in the group. The researchers activated the group and allowed participating midwives space to exchange messages and photographs. Discussions were observed by the researchers over a period of 3 weeks. The WhatsApp group aimed to allow midwives to share experiences, best practices, successes and challenges related to their daily work, and encourage networking and support among the midwives, so that the research team could gain more insights into the midwives' daily experiences and inform the future content of the BScM programme to better support midwives.



SNAPSHOT OF CHANGE



At the end of each section of the interview, respondents were asked closed questions intended to summarise the changes they had experienced over the previous 2 years in the latter phase of their studies and as they transitioned back to full-time work. These data provide a useful snapshot of responses as an introduction to the findings. However, it is important to stress that these closed questions were limited in their scope, as respondents were only given four response options: better, worse, the same or not sure. The narrative responses provide more detail of the often complex and multiple drivers of these changes. Details of the closed questions can be found in Table 4.

Table 4: Closed questions by domain

Question ID	Question	Domain
B2	In the last 2 years, has your role in the workplace: Improved / No change / Got worse / Not sure?	Workplace roles
C2	In the last 2 years, do you think your professional ability/skills are: Better / Stayed the same / Worse / Not sure?	Skills
D2	In the last 2 years, has your confidence to undertake your day to day role: Increased / Stayed the same / Got worse/ Not sure?	Confidence in role
E2	In the last 2 years, do you feel that your professional relationships are: Better / The same / Worse / Not sure?	Professional relationships
F2	In the last 2 years, do you feel that your relationships with your friends and peers are: Better / The same / Worse / Not sure?	Personal relationships
F5	In the last 2 years, do you feel that your relationships with family members are: Better / The same / Worse/ Not sure?	Personal relationships
G5	Overall, taking all things into account, do you think your wellbeing has: Improved / Stayed the same / Got worse/ Not sure?	Wellbeing
H3	Overall, do you think your career opportunities are: Better / The same / Worse/ Not sure?	Career prospects and aspirations for future

Table 5 provides an overall snapshot of change experienced by all respondents over the last 3 years in seven different areas of their life, ranging from their work roles to wellbeing. The table paints a picture of overall positive changes across all areas of respondents' lives. All 14 respondents reported positive changes in their role in the workplace, professional skills, confidence in their job, professional relationships and career aspirations domains. In the family relationships domain, 13 respondents reported positive change, and one reported no change. Twelve respondents reported positive changes in the wellbeing domain, and two reported no change. Finally, 13 respondents reported positive changes in the personal relationships domain, and one reported a negative change. This negative change related to the deterioration of friendships due to growing apart after the respondent had finished their degree.

Table 5: Respondent perceptions of overall change: a snapshot

Respondent	Years of practice before study	Distance to study	Age, years	Role in workplace	Professional skills	Confidence in job	Professional relationships	Friend/peer relationships	Family relationships	Wellbeing	Career opportunities
EOF-1	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	=	+
EOF-2	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	+	+
EOF-3	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	+	+
EON-1	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	+	+
EON-2	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	+	+
EON-3	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	+	+
EON-4	+ 9 years	+ 9 years	<35	+	+	+	+	+	+	+	+
EON-5	+ 9 years	+ 9 years	<35	+	+	+	+	+	=	+	+
LXF-1	- 9 years	- 9 years	>35	+	+	+	+	+	+	+	+
LXF-2	- 9 years	- 9 years	>35	+	+	+	+	+	+	+	+
LXN-1	- 9 years	- 9 years	>35	+	+	+	+	+	+	+	+
LXN-2	- 9 years	- 9 years	>35	+	+	+	+	+	+	+	+
LXN-3	- 9 years	- 9 years	>35	+	+	+	+	+	+	+	+
LXN-4	- 9 years	- 9 years	>35	+	+	+	+	+	+	+	+

Key to table

Positive change	+	Negative change	-	No change	=
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MINISTRY OF

MAIN FINDINGS



This section of the report presents the main findings from the QuIP study. It begins with an overview of the main reported changes, and then details the broad attribution of changes across domains. This builds on the snapshot of change outlined in the previous section and sets the scene for an in-depth exploration of the findings in terms of the most significant story of change, causal links between the outcomes and drivers within this and the attribution of these changes. From there we move on to consider the stories of change within each domain, illustrated with data visualisations and quotations, before concluding with a narrative account of the changes experienced as a complete story in the words of a graduate midwife.

Main reported changes

The overall impression of the graduate midwives' professional and personal lives was that they were moving forwards in a positive way. Most reported changes were positive and reached across all domains. Far fewer negative outcomes were cited, although these revealed some interesting facets of life post-AKU, which will be discussed later in this section of the report. To set the scene, the heat map below (Figure 7) shows the broad range of positive outcomes reported across the data set to give a sense of the variety of changes that happened in the lives of participating midwives since their graduation from AKU.



Figure 7: Majority of positive changes reported by graduate midwives

Increased skills and knowledge	Improved communication skill	Improved working relationships with colleagues	Deeper commitment and interest in midwifery	Improved family relations	Increased responsibility at work	More confident in clinical decision-making	More confident voicing opinion
	Improved quality of patient care	Practice patient-centred care	Obtained more senior/better paying job	Practicing evidence-based midwifery	Improved relationships with patients/more respect from patients	Spending more time with family and friends	Better work-life balance
Increased confidence/sense of self-worth	More respect from colleagues	More confident interacting with colleagues	Training other staff and medical students/better paying job	Encouraging other midwives to apply to AKU	More involved in decision-making	Become role model/inspires others	Provide training/continuing medical education to peers
	Colleagues consult midwife for advice/mentoring	Peer support, advice and discussion	Increased critical thinking/self-awareness/reflection	Increased income	Support family financially	AKU staff available for consultation when needed	Attending and presenting at conferences
Improved ability to perform work duties	Higher aspirations for the future/increased determination to advance career	More career opportunities available	Better equipped to face challenged/traumatic situations	Able to manage money more effectively	Educate/train women during outreach	Improved record keeping/admin skills	Reads up on procedure
				Improved ability to handle stress	Less stress	Improved time management	Sharing AKU experience with other midwives

Note: Box size and colour denotes the frequency of outcomes reported, with larger boxes revealing the most commonly cited outcomes.

Taking a closer look, the heat map in Figure 8 focuses on the most frequently cited positive outcomes to show the most significant changes that happened in the lives of the graduate midwives. The most frequently cited positive outcome was improved skills and knowledge, which was cited 87 times by the 14 respondents across the data set. Other significant positive outcomes were increased confidence and self-worth, improved ability to perform work duties, and to a lesser extent, improved communication skills, better patient care, increased respect from colleagues and an improved confidence in working with them. The latter factor also related to being consulted for advice and mentoring in the workplace. Practicing patient-centred care was also an important change in the working lives of the graduate midwives, along with having higher aspirations for the future. Eight midwives reported obtaining a more senior and/or better-paid job after graduation.

Figure 8: Most frequently cited positive outcomes

Increased skills and knowledge 81 (14)	Improved ability to perform work duties 40 (14)	More respect from colleagues 26 (12)	Colleagues consult midwife for advice/mentoring 25 (13)	Higher aspirations for the future/ increased determination to advance career 24 (14)
	Improved communication skills 28 (12)	Improved working relationships with colleagues 22 (12)	Peer support, advice and discussion 21 (12)	More career opportunities available 20 (12)
	Increased confidence/sense of self-worth 47 (14)	Improved quality of patient care 28 (13)	Practice patient-centred care 22 (10)	More confident interacting with colleagues 21 (11)
				Obtained more senior/better paying job 19 (8)

Note: The values below the descriptions refer to the number of respondents who reported the outcome; one unique count per respondent per domain out of a theoretical maximum of 98 across the data set. Numbers in parentheses denote total number of respondents citing that outcome (out of a possible 14). Box size and colour denote the frequency of outcomes reported, with larger boxes revealing the most commonly cited outcomes.

Moving on to consider the negative changes reported by respondents, the heat map below (Figure 9) details the reported negative outcomes experienced since graduating from AKU. Note that the number of times each outcome was reported was far lower than for positive outcomes.

Figure 9: Negative changes in the lives of the participating graduate midwives

Co-workers feel threatened by degree qualification	Unable to treat patients effectively	Increased competition among midwives for jobs	No income increase despite degree qualification		
		Increased levels of stress	Increased pressure to earn money		
		Unable to apply for jobs/further study	Financial situation has not improved despite new job		
		Friends feeling inferior if they do not have a degree	Getting less sleep		
Resentment from colleagues	Spending less time at home	Colleagues put burden of work on graduate midwife	In debt	Lost friendships	Refers patients to other, better equipped hospitals
		Does not have relevant papers/transcript	Lack of senior staff positions	Unable to delegate work to delegate	
		Feel less confident in own abilities	Lack of staff		
Increased workload	Trying to hold down two jobs simultaneously				
		Deterioration of professional relationship at work			

The most frequently reported negative outcomes are summarised in the heat map below (Figure 10). Co-workers feeling threatened by the graduate midwives and resentment from colleagues were the two most commonly cited negative outcomes, which reflected professional jealousy regarding the graduates having a degree qualification. This was followed by increased workload, usually due to having a new job, which also related to spending less time at home. The systemic failings of the healthcare system in Uganda were the main reasons cited for being unable to effectively treat patients, although this was not a recent change. Several respondents spoke about having improved skills, knowledge and confidence as midwives, but not having the resources or necessary staff levels to treat all patients effectively.

Figure 10: Main negative outcomes reported by graduate midwives

Co-workers feel threatened by degree qualification 12 (10)	Increased workload 10 (10)	Trying to hold down two jobs simultaneously 4 (4)	Increased competition among midwives for jobs 3 (3)
	Unable to treat patients effectively 7 (5)	Increased levels of stress 3 (3)	No income increase despite degree qualification 3 (3)
Resentment from colleagues 11 (10)	Spending less time at home 6 (6)	Unable to apply for jobs/further study 3 (3)	Increased pressure to earn more money 3 (2)

Note: The values below the descriptions refer to the number of respondents who reported the outcome; one unique count per respondent per domain out of a theoretical maximum of 98 across the data set. Numbers in parentheses denote the total number of respondents citing that outcome (out of a possible 14). Box size and colour denote the frequency of outcomes reported, with larger boxes revealing the most commonly cited outcomes.

In summary, negative outcomes were considerably less frequently reported than positive changes. However, that is not to say that these outcomes were not important in respondents' lives. Participating midwives reported negative effects from having to work more than one job to manage financially, the death of a patient, no increase in income despite having a degree, facing resentment and jealousy from colleagues who had not undertaken degrees and suffering the deterioration of friendships. These factors will be discussed in more detail in subsequent sections of the report.

Attribution of change across domains

Looking broadly across the data set, the chart below summarises the attribution of positive changes across the seven domains. It was clear that respondents attributed a significant number of positive changes in their lives to AKU BScM programme. Every domain showed a strong correlation between attending AKU and positive change. In fact, in the skills and confidence in the role domains, AKU was the only attributable source of change. The data show that the BScM programme triggered significant changes in respondents' professional lives, and to a slightly lesser extent, their personal lives. There were no discernible differences between the different respondent variables, with older and more experienced midwives reporting just as many positive changes attributable to AKU as younger less experienced midwives.

Figure 11: Attribution of positive change across all domain

Positive attribution across domains

■ Explicit attribution to AKU Uganda BSc Midwifery degree ■ Implicit attribution to AKU Uganda BSc Midwifery degree
 ■ Attributed to other sources

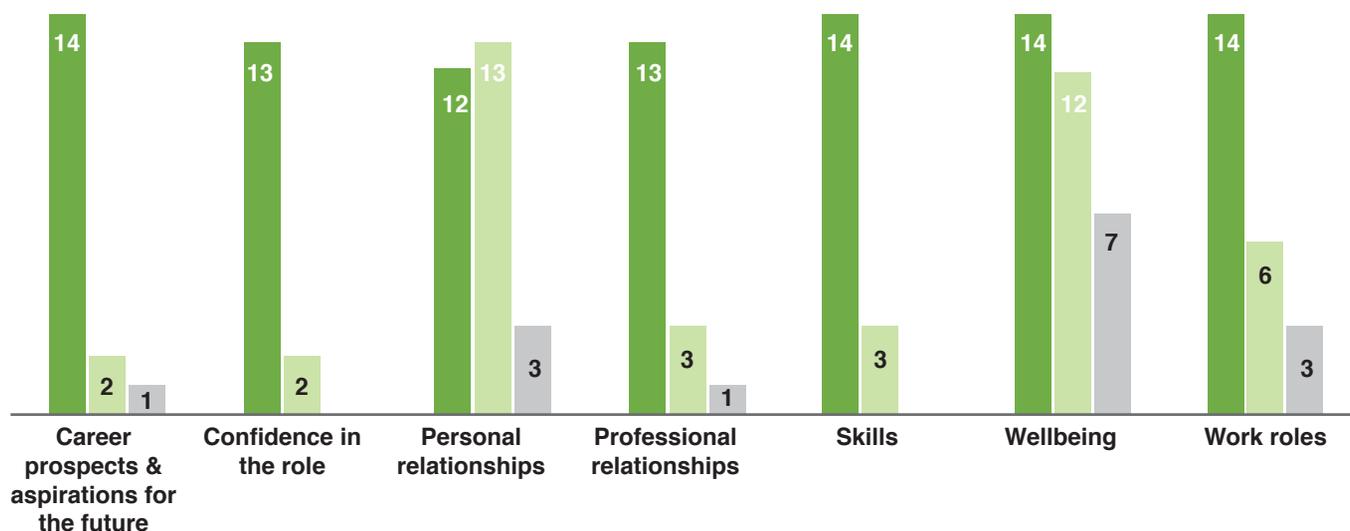


Table 6 breaks down the attribution of positive changes by respondents, enabling readers to identify patterns emerging in the sample¹⁰.

Table 6: Attribution frequency of positive outcomes across domains

Domain	Explicit attribution to AKU Uganda BScM	Implicit attribution to AKU Uganda BScM	Attributed to other sources
Work roles	EON-3 EON-4 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYN-2 LYF-1 LYN-4 LYF-2	EOF-1 EON-2 EON-5 LYN-1 LYN-3 LYF-1	EON-3 EON-4 EOF-2
Skills	EON-3 EON-4 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYN-2 LYF-1 LYN-4 LYF-2	EON-4 EOF-3 LYN-4	
Confidence in the role	EON-3 EON-4 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYF-1 LYN-4 LYF-2	EOF-3	
Professional relationships	EON-3 EON-4 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-2 LYF-1 LYN-4 LYF-2	EOF-3 EON-5 LYF-1	EOF-3
Personal relationships	EON-3 EON-4 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYF-1 LYN-4 LYF-2	EON-3 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYN-2 LYF-1 LYN-4 LYF-2	EON-1 EOF-3 EOF-2
Wellbeing	EON-3 EON-4 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYN-2 LYF-1 LYN-4 LYF-2	EON-3 EON-4 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYN-2 LYF-1 LYN-4 LYF-2	EON-3 EON-4 EOF-1 EON-1 LYN-1 LYN-3 LYN-2
Career prospects and aspirations for the future	EON-3 EON-4 EOF-1 EON-1 EON-2 EOF-3 EOF-2 EON-5 LYN-1 LYN-3 LYN-2 LYF-1 LYN-4 LYF-2	EON-3 LYN-3	EON-4

¹⁰Please refer to Table 2 for details of respondent codes.

Figure 12: Attribution of negative changes across all domains

Negative attribution by domain

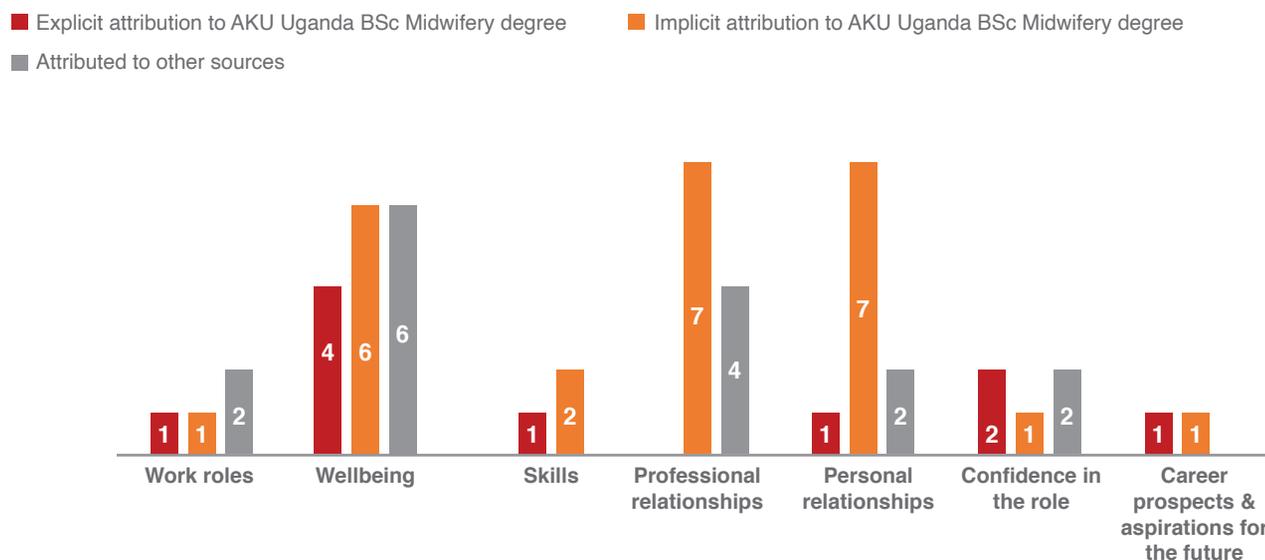


Table 7 breaks down the attribution of negative changes by respondent, enabling readers to identify patterns emerging in the sample¹¹. Slightly more negative changes were reported by older, more experienced midwives than by younger less experienced midwives. However, in the professional relationships, personal relationships and wellbeing domains, negative changes were reported equally by both age groups.

Table 7: Attribution frequency of negative outcomes across domains

Domain	Explicit attribution to AKU Uganda BScM	Implicit attribution to AKU Uganda BScM	Attributed to other sources
Work roles	EON-3	EON-5	EON-3 EON-5
Skills		EON-4	EON-3 LYF-1
Confidence in the role	EON-2 EOF-2	EON-4	EON-3 EOF-3
Professional relationships		EOF-3 EOF-2 EON-5 LYN-1 LYN-2 LYF-1 LYF-2	EON-3 EON-4 EOF-3 LYF-1
Personal relationships	LYN-1	EON-3 EON-4 EOF-2 LYN-1 LYN-2 LYF-2	EON-3 EOF-3
Wellbeing	EON-3 EOF-1 LYN-4 LYF-2	EON-3 EOF-1 EOF-3 LYN-3 LYN-2 LYN-4	EOF-1 EON-2 EOF-3
Career prospects and aspirations for the future	LYN-2	EOF-1	LYN-1 LYF-1 LYF-2

¹¹Please refer to Table 2 for details of respondent codes.

Significant stories of change driven by the BScM

While each respondent was unique and had their own life experiences, there were some common threads throughout the data set, revealing a number of core changes that were common to all graduate midwives. The main story of change, iterated in various ways by all graduate midwives, was **that undertaking a degree at AKU had increased professional skills and knowledge leading to:**

- Improved ability to undertake day-to-day work by practising evidence-based midwifery
- Increased confidence in clinical decision-making and voicing medical opinions, resulting in midwives being more assertive in making themselves heard within clinical settings and increased confidence interacting with colleagues
- Greater respect from colleagues, linked to being consulted for advice on patient treatment, training medics and students in the workplace and better working relationships
- Better communication skills resulting in midwives practicing patient-centred care and fully engaging with their patients as individuals, leading to improved relationships with patients and better care overall
- Increased confidence, self-assurance and self-belief in all areas of life, but particularly professional practice
- Greater self-awareness and enhancement of critical thinking skills positively affecting midwives' work and home lives
- Improved ability to handle stress and deal with challenging and traumatic situations
- Increased commitment to continuing medical education and midwifery as a profession
- More career opportunities available to graduate midwives
- Higher aspirations for the future, including undertaking post-graduate study and a strong determination to progress in their chosen careers.

Another important story of change was that graduate midwives had set up their own community of practice via WhatsApp to support each other professionally and personally, share knowledge, consult and advise on clinical situations, promote job opportunities and encourage and nurture each other (this was prior to and different to the WhatsApp group set up for the QuIP study).

On the negative side, two stories attributable to AKU dominated:

- Increased levels of resentment and jealousy from less qualified colleagues leading to deterioration of professional relationships, with graduate midwives being unable to delegate work and therefore having an increased burden of work placed on their shoulders
- Being in debt from AKU tuition fees resulting in graduate midwives not seeing an increase in income despite higher paying jobs, having to work more than one job to make ends meet or being unable to apply for new jobs as their transcript/certificate had not been released because they had not paid all their fees.

In the background was commentary on the lack of resources and staff throughout the healthcare system in Uganda, which negatively affected the midwives' ability to undertake their jobs effectively.

AKU BScM programme was a driving force for significant change across all domains for the participating graduate midwives. This was broken down into two key drivers: **graduating from AKU**, which was cited 84 times across the data set by all 14 midwives, and **training received at AKU¹²**, which was cited 64 times across the data set by 13 respondents. The network diagrams in Figures 13, 14 and 15 illustrate the variety of first level changes driven by graduating from AKU and receiving training from AKU.

¹²Training received at AKU was used as the driver when respondents spoke generically about studying at AKU. More specific training, such as learning about evidence-based midwifery, interpersonal communication, presenting, budgeting and teamwork were coded under separate driver tags.

Figure 13: Positive outcomes driven by graduating from AKU

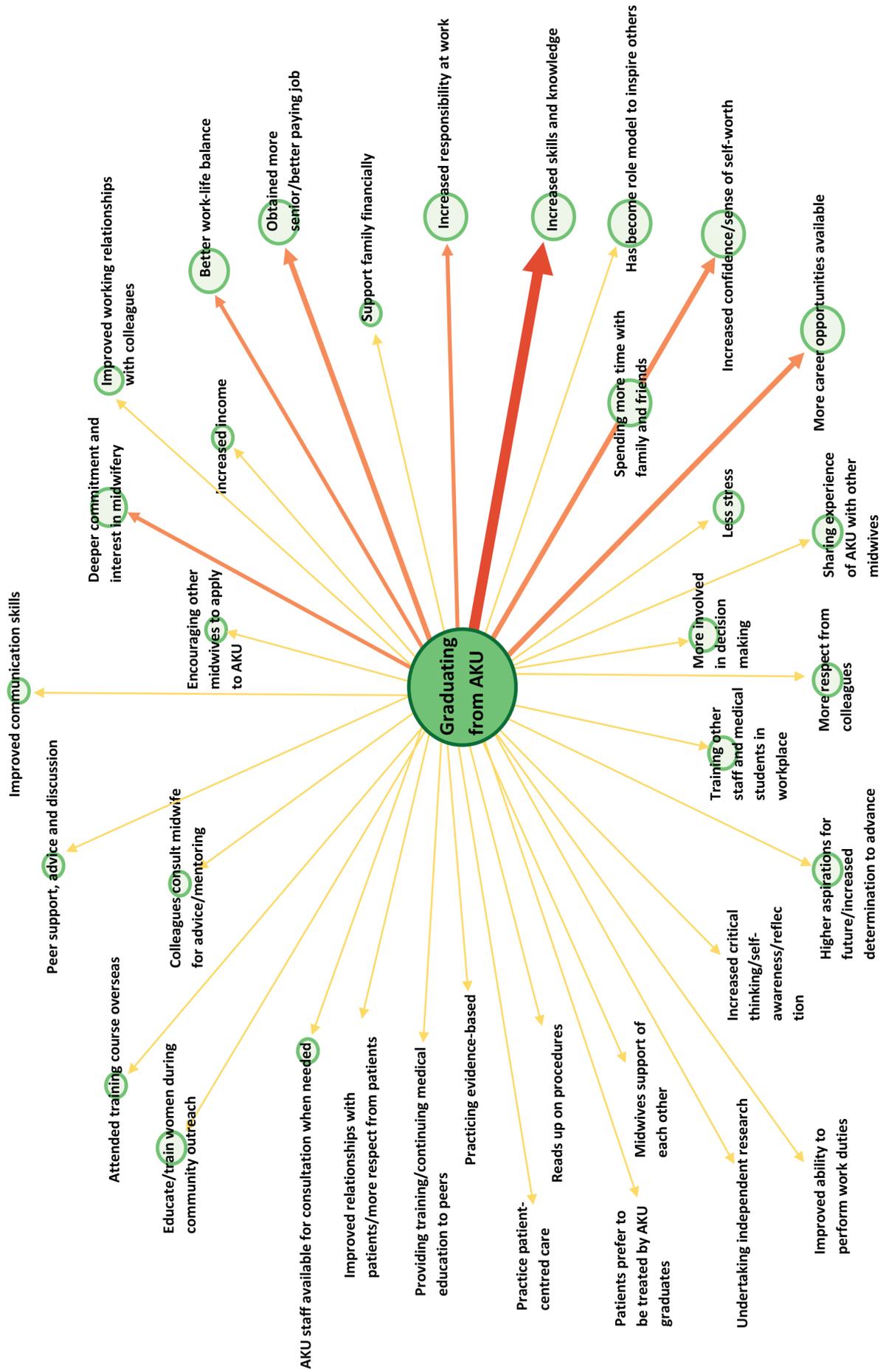


Figure 14: Positive outcomes driven by training received at AKU
 Note: weight of the arrow denotes strength of the relationship, with thicker arrows indicating the highest frequency of citation.

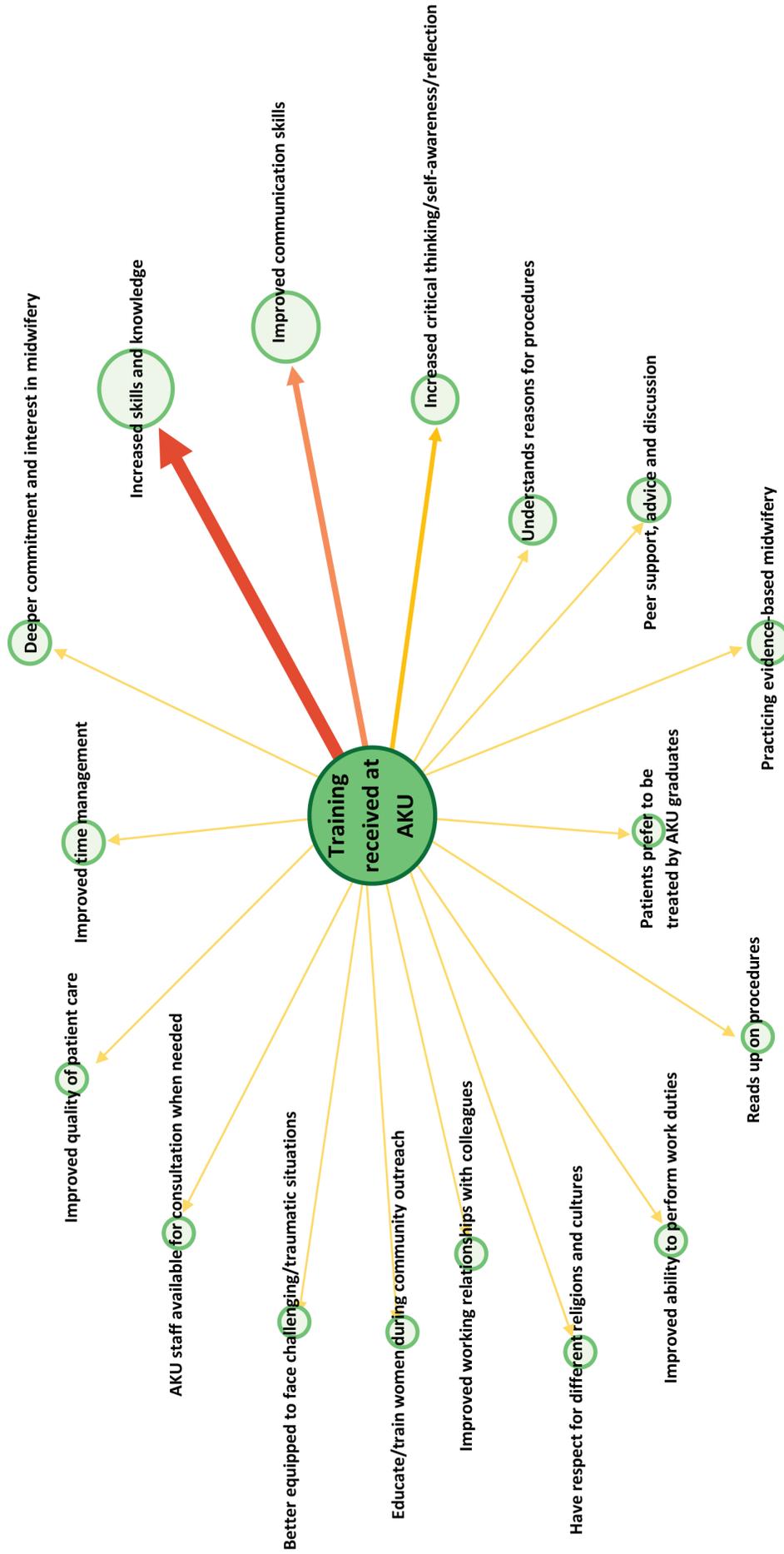
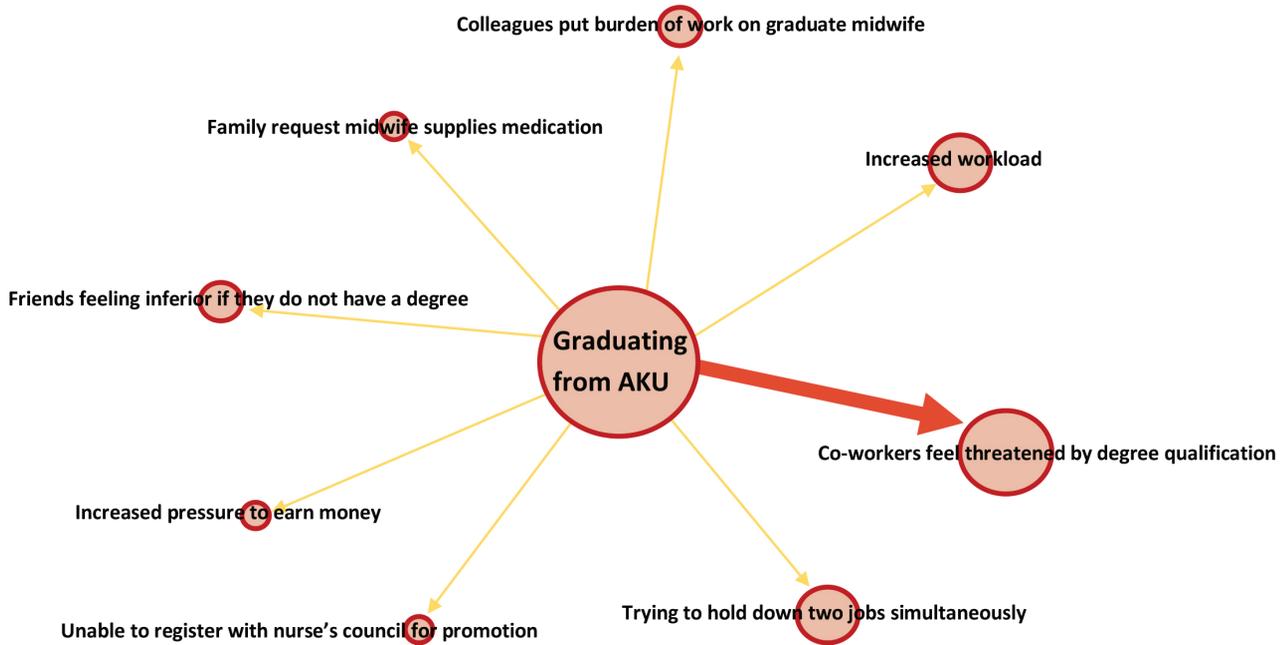
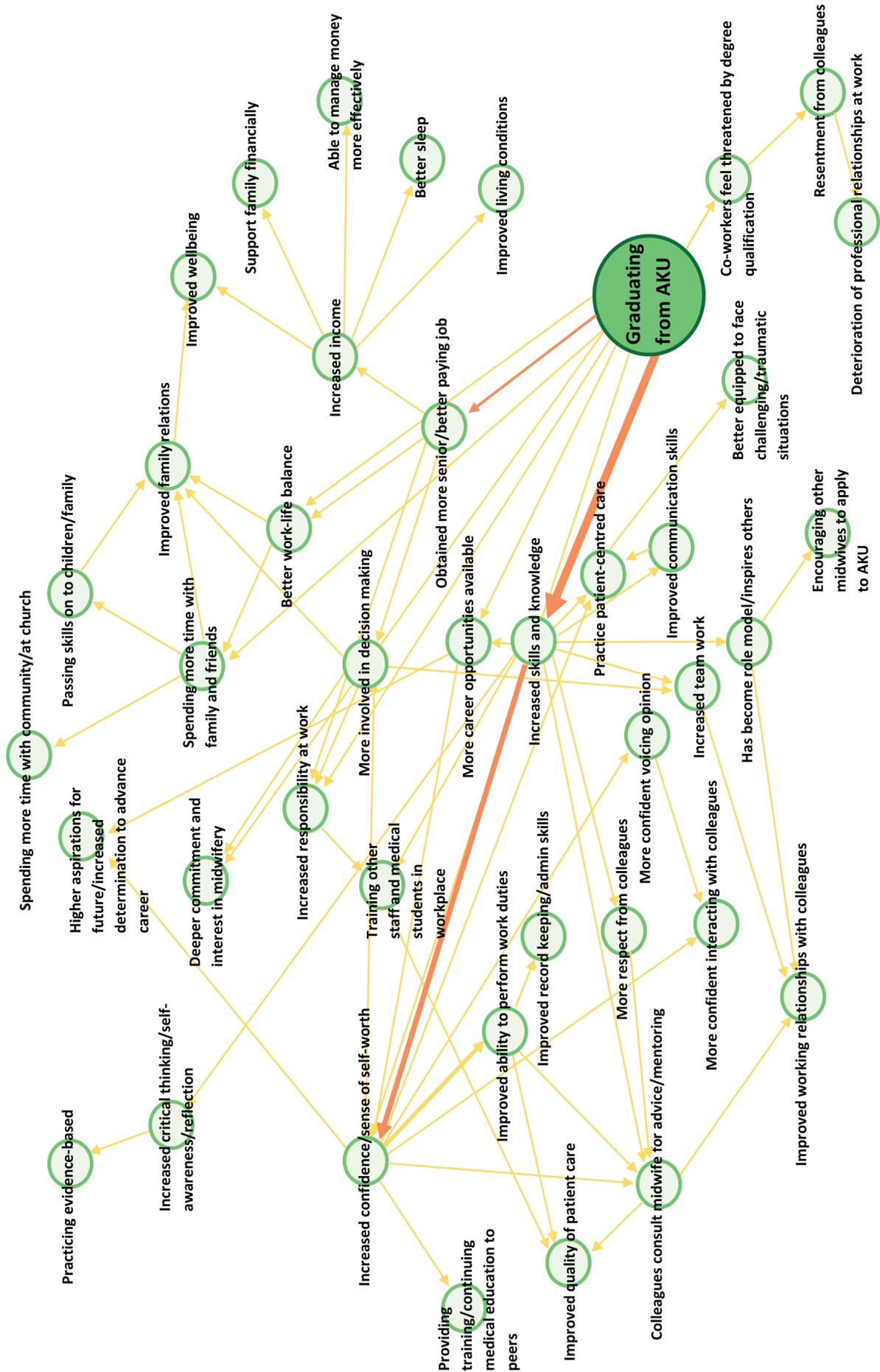


Figure 15: Negative changes driven by graduating from AKU



Looking more closely at the relationships between drivers and outcomes, it is possible to create a picture of causal chains making up the various stories of change driven by undertaking a BScM at AKU, illustrated in two network diagrams (Figures 16 and 17).

Figure 16: Changes driven by graduating from AKU



Although receiving training from AKU and graduating as a midwife were the most frequently cited drivers of change, they were not the only drivers. Other cited drivers of positive change included:

- **Midwives being supportive of each other**, cited 13 times by 10 respondents
- **Receiving evidence-based training at AKU**, mentioned nine times by five respondents
- **Staff at AKU inspired midwives**, reported seven times by six respondents
- **Trained in communication/interpersonal skills at AKU**, cited six times by five respondents
- Having a new job, reported six times by four respondents
- Learned stress-reduction techniques at AKU, stated five times by five respondents
- Learned time-management skills at AKU, cited five times by four respondents
- Trained to work in teams at AKU, reported five times by four respondents
- Paid off tuition debt, mentioned five times by five respondents
- WhatsApp group for AKU midwifery graduates, cited five times by three respondents

The most frequently reported driver of negative outcomes was **lack of resources** (in public hospitals), which was cited seven times by four respondents. Other drivers of negative change attributed to AKU included:

- **Being in debt to AKU (tuition fees)**, mentioned five times by five respondents
- **Lack of experience in specialisms**, reported twice by two respondents.

In addition, three other drivers were mentioned only once by one respondent, but are listed here as they relate to AKU:

- Lack of a forum to communicate with peers outside work
- Lack of scientific writing skills
- Insufficient training on hypertension during degree

Having presented the most significant stories of change that cut across the domains along with the key drivers, it is important to look in more detail at the various causal chains that were reported in relation to skills, work role, professional relationships, confidence in the role, personal relationships, wellbeing and career aspirations and future prospects. Each domain begins with a brief overview before outlining the key stories of change, illustrated by quotations from the interviewed midwives.

Stories of positive change in the skills domain:

Most stories of change in the skills domain were attributed directly to AKU and revolved around an increase in skills and knowledge derived from completing the BScM, which all 14 midwives reported as a positive change that initiated a variety of other positive outcomes. These reflected the overall main story of change of improved professional practice, including being better able to perform their role at work and receiving more respect from colleagues. In addition, improved communication skills resulted in midwives practicing patient-centred care. In turn, this resulted in improved relationships with patients and led to an overall improvement in patient care. The quotations below illustrate these key stories of change.

EON-3: C1: Because of the training I got at university, my capacity to perform my duties has increased. My clinical skills have changed because there are changes in the way I care for mothers. I take much time with the mother making sure that I give them the right service at the right time and to the right person. At Aga Khan I learned to deliver appropriate services that meet the needs of those in need of my support...Communication has greatly improved even with my fellow staff...From my colleagues at least I've got it [positive feedback] from the doctor himself, he has always said it but I have not had it from any midwife yet (laughs) but doctor has said it.

LYN-3: C1: I now know why I perform every procedure not just that because I was told what to do, but I know why I give antibiotics for example, how to handle babies. For example, if a mother is pushing a baby and it gets stuck I do a manoeuvre knowing it is going to help in a particular way. Before you would know that you put the legs like this full stop, but now I know when I put the legs in a given position, I know what it is doing to the baby who is inside and how it will solve the problem. I can diagnose the different patient conditions and I know what to do; where I have limitations, I refer. I attribute this to the added knowledge that I acquired from the university. There are some patients who have told me that I explain to them their conditions and treatment well compared to other health workers who just give them medicines without any explanation. The more I engage with patients and making them also get involved in the care the more they like me. Sometimes it even ceases to be a nurse-patient relationship to actually a colleague. Most of my colleagues say I have changed. I do things better than I used to do them and this mostly comes from the supervisors like the doctors come and tell me that what [I] do in the ward [is] great. I have had a chief nursing officer coming to shake my hand because he has gotten a report from a patient or a consultant. For the fellow midwives it's just a few who come out and tell me that they are happy with what I'm doing. It actually gives me more energy to do my work better than I did it before.

EON-1: C1: In midwifery you do what you know. Since I have the skills that I got from the university, I am able to perform my duties in my role. Before we would just do what you are told but now we practice evidence-based

midwifery. I deal with person individually and I prioritise what to deal with first after conducting the nursing diagnosis depending on the condition of the patient. The way I relate with people is so different. I handle my clients in a more polite manner than other midwives. For instance, when I was coming back yesterday after getting my maternity leave, they all ran to the vehicle I was in asking me who was to work on them yet there are other midwives who remained at the health centre.

EOF-2: C1: In the clinical practice I now use evidence-based interventions, with evidence-based, it means that I know what to do and why I do it, I have practiced it and it has worked out. I can confidently identify a condition and decide on what to do. Now the quality of care I am more tolerant than the staff I work with even if the mother is highly irritable I can calm her down, and after the delivery I have seen many come back to thank me. I attribute these changes to the programme I went through mainly because at diploma we were given knowledge but we were not empowered; in fact at Aga Khan, I was empowered with practical skills of what to do but in addition, we have evidence that backs those practices.

LYN-4: C1: I think it has changed because the way I interact with my colleagues, the way I display myself, communication with the rest of the workmates all have changed before I went back to school, according to me all those things were very bad but now I have totally changed. Where I work now everyone wants to work with me because they know that whenever [I] am on duty I portray professionalism even they tell the in-charge wants to work with me, so I think they appreciate my professionalism.

LYF-2: C1: I have the skills and knowledge now I argue with doctors and we really reach a compromise but before I could not. I have changed; I learn and share with colleagues about quality of care. Some colleagues have gone ahead to ask me where I trained from because of some things I do so different from my colleagues.

Stories of negative change in the skills domain:

A limited number of negative stories of change were reported in the skills domain. Only one story was indirectly attributed to AKU and related to a concern that becoming a preferred midwife would lead to the respondent being isolated from her colleagues.

EON-4: C1: The negativity may not be as bad as it is but there is a fear that it can affect maybe your relationship with other people. If you become a preferred midwife and all praises are heaped on you, colleagues can withdraw and you get overwhelmed.

The other two negative stories of change were attributed to other sources, namely the systemic failure of healthcare resources in Uganda.

EON-3: C1: Low staffing is also another problem if I am alone on duty and certain procedures are needed, for example in these assisted deliveries if a mother gets obstructed labour or has a shoulder disorder I need another skilled worker to assist me so that we can get women in such circumstance to delivery vaginally...And the other issue is about the staffing as I told you because if you are the only person who knows something and you are really trying to let everyone learn and some people are like we cannot do that so others have not yet had that positive attitude.

LYF-1: C1: The quality of care I give depends on the patients' needs and now I give the best I can...Sometimes the availability of resources, for instance if I have all tools I need, the drugs to give to the patients then I feel comfortable, but there are times when you need to do the needful but there are no drugs and sometimes you feel like why did I come to work?

Stories of positive change in the work role domain:

Most stories of change in the work role domain revolved around changes happening as a result of increased skills and knowledge derived from completing the BScM, and were therefore directly attributable to AKU. Several respondents reported having more responsibility at work following the completion of their degree, as illustrated in the quotations below.

LYN-2: B1: In our hospital we didn't have a section that admits neonates so when I graduated I was chosen to start up this section and asked to provide the list of items needed, equipment, management. It is going to be put in place. In the meantime, when anyone needs assistance in managing neonates, I am always looked at as the first person to be contacted so that I help out.

LYN-3: B1: At my workplace, I am an in-charge of medical training and at the same time I am a shift leader in one hospital while in the other hospital I stand in for our in-charge in case she is away.

EOF-1: As I enrolled in school I was partly put down because I was managing a unit but when I enrolled in the second year my supervisors thought I was too busy so I was removed from being in charge of the health unit. But when I came back after my degree I was reinstated.

LYF-1: B1: When I graduated I was working in charge of a cancer ward, but in December I got an appointment to be the in-charge of the infection control unit in a referral hospital. I may not say it's a promotion but it's an added responsibility. In this new unit I am not so much working on mothers, it's more of quality clinical care to see that the hospital is clean and safe so that mothers do not get any infections from the hospital or even doctors, nurses and other staff do not get infections from patients or from the place of work. I am now more of a teacher and an administrator.

In addition, several midwives reported being better able to undertake their role at work.

LYF-1: B1: I have managerial skills and attitude, I am willing to work and I supervise myself. When I am on duty I make programmes for all units and make sure they have all the basic things they need for infection control and supervise and see all those things are in place and I take action.

LYN-1: B1: Ever since I joined the midwifery programme very many things changed, the way I work while on duty, my approach to patients, caring for them changed and even behaviour, time management, communication skills so all those things changed. For example the time management, I had to do it very well so that I fit in the programme at the same time working.

EON-1: B1: The change of jobs has worked for me, because the previous organisation where I was working I would concentrate on antenatal but currently where I am working I do everything in midwifery; that is to say antenatal, helping mothers deliver and postnatal and this has helped me save mothers' lives because I am in position to identify mothers at risk by just looking at them. I gained these experiences at university training; we were exposed to many different cases during our clinical practicum in Mulago Hospital which helped to broaden my knowledge.

Graduating from AKU with more skills and knowledge also opened up new career opportunities for a number of the midwives interviewed.

LYF-1: B1: I was invited by the Ministry of Health in December 2017 to participate in the development of guidelines for infection control and prevention in the country, and I am expecting the final guidelines to come out soon. I don't know what criteria they used, but when I asked why I was given these roles they told me it is because I have been in school and I have got the new knowledge.

LYN-4: B1: After seeing the improvement in the way I work, the in-charge asked me to help me teach the rest of my colleagues the way you was taught at school and also mentoring them so that's the role I was given, and also research because there is a doctor who partnered with me to carry out research.

LYN-3: B1: Three months ago, I was called by a private hospital in town and I was told that someone had recommended me to them. They wanted to interview me to join them but so I declined the offer because they were paying me little money. My head of department has also opened up a hospital and he is pestering me to work for him but the amount of money he is giving is little so I can't work for it with my degree because it is actually less than what I am earning in the private hospital at a diploma-level salary. Of course my going back to school that led to the addition of knowledge and improved confidence is the reason for these changes.

LYN-2: B1: I have been contacted by one of the professors from the Democratic Republic of the Congo (DRC) about treatment with natural products to do research with him so that was an opportunity I got after getting a bachelor's degree in midwifery. The reason for this is that I am now knowledgeable and confident.

The graduate midwives also reported going into their communities to offer training to women once they had graduated. In some cases this was as part of their current job, but in other cases it was because they now had a deeper commitment to midwifery and wanted to offer support to pregnant women.

EOF-3: B1: We visit the community; I conduct community dialogues to deal with the problems of delivery under traditional birth attendants. I work with Village Health Teams whom I oriented at the beginning. We have identified all traditional birth attendants and we meet them to sensitise the mothers in the community on safe delivery. There are some trainings that are going on in the district and I am one of the trainers in Kamuli, Iganga, Bugiri, Busia, Buyende and Jinja. I go and support them...I attribute these changes to my better knowledge after I graduated from Aga Khan. I have more skills and I am confident because I know what to do.

EON-5: B1: In my community I encourage pregnant women to attend antenatal care. Because of this, sometimes I report on duty with five women from the community following. I am advocating and encouraging early antenatal care and participation of men in antenatal care.

LYN-1: B1: I talk to pregnant mothers whenever I find them, I health educate them, I encourage them to go to the hospital for checkups.

LYN-3: B1: In the community, I provide home nursing; whoever is pregnant around my area comes and consults me when I am available because I am rarely home and I always advise them and refer them.

Stories of negative change in the work role domain:

A limited number of negative stories of change were reported in the work roles domain. One midwife (EON-3) reported that her day-to-day work had not changed, and expressed her disappointment at not being able to practice more specialised midwifery. In addition, she spoke about her colleagues now viewing her as a threat because of her degree, although she countered this by saying that her patients preferred to be treated by her because of the quality of care she offered.

Another respondent (EON-5) explained that although it was difficult to get a hospital promotion, she was trying to perform exceptionally well so that the hospital administration would consider her for a more senior role.

Stories of positive change in the professional relationships domain:

Most stories of change in the professional relationships domain revolved around increased confidence, both personally and professionally, derived from completing the BScM and gaining improved skills and knowledge. These changes were directly attributable to AKU. The increase in self-confidence was coupled with a higher level of confidence in clinical decision-making, voicing medical opinions and interacting with colleagues (particularly discussing treatment options with doctors) and an improved ability to perform day-to-day work. In turn, this led to more respect from colleagues—doctors more so than other midwives in some cases, an increase in the amount of advice and consultation sought from the graduate midwives and overall improved professional relationships at work.

Several graduate midwives reported being more respected by their colleagues after graduating, leading to an increased level of consultation on clinical matters and improved relationships.

LYF2-: E1: I am consulted by colleagues and my seniors on case management. It's because I attended university, and as I've told you earlier, at Aga Khan faculties would not just leave you alone, they will not leave any other stone unturned—they will make sure you get it.

EON-2: E1: I like sharing knowledge and colleagues who are studying normally consult me. Because I am more knowledgeable than some people I working with they appreciate my input...The reason for this is the training we went through at Aga Khan.

EON-5: E1: I know how to talk, when to and when not to talk. There are issues that I need to address with my workmates and those I should not, I cannot outline them here but I know how to draw the line. If I have any issue that is going to stop me from coming to work, I communicate. I can either make a phone call and tell them I am not going to work and give them my reasons and request them to step in for me. I can communicate to my in-charge and even go ahead and communicate to others needed.

LYN-2: E1: I know now how to handle my team. I know the type of each person who can I get closer to if am introducing something new. If I want a winning team where should I run first, who should I first go to in order to attract the rest of the other members. Before you would just jump to anyone but now I know the different characters of my colleagues so am now able to decide who to go to for what reasons...Going back to school, I have the confidence of my supervisors and colleagues.

EON-3: E1: Even the way I conduct myself with my colleagues, the way I do my work, the way I provide services, the way I communicate, I would say I've changed in many ways. I no longer come late, I always communicate—communication was not very good with our superiors especially at the district but right now it is okay.

LYF-1: E1: People from different wards come and seek my opinion on mother care, drafting official letters; I have helped more than five people. When I went back to school I have implemented the knowledge, skills and improved my way of doing things. I had to imitate the way the faculties worked when you could approach them because they helped us.

The midwives also spoke about being more confident in their clinical decision-making after completing their degree, and feeling more able to voice their opinions in clinical settings.

EON-1: E1: Before going for the degree course, we would wait for the doctor or clinician to make decisions; for example, when you were referred a mother, the doctor had to first approve but now I don't need to consult when I am referring. After doing my assessment very well I know the outcomes, I don't need to waste time waiting for a doctor to come. As I said it is a win-win. I try to express my views on how other people have done things if not quite right; for instance if I saw a colleague put a used needle in the wrong place, yet there is a bin where you should put it, I would just ask her, 'Don't you think what you have done is a bit messy? Supposing you had put it in the bin, don't you think it would have been better, how do you feel if the environment is really very organised?' So you have not offended anybody and they would say I think that is the right way to do things. I would tell her 'I know you are tired but let us do things in the right way'...My university training has changed me.

EOF-3: E1: If there is something that needs to be addressed and I can, I do...I think it's because of the capability and the knowledge that I have.

EON-5: E1: I give my opinion or sit together with colleagues to discuss an issue and we make a decision as a team. I can say the program changed me because it has improved me to some greater level.

LYN-4: E1: Now I can interact with doctors, I can interact with the in-charge and I can say no in the management of some cases if am not satisfied with the procedures that they are taking.

LYF-1: E1: My confidence expressing my opinion has changed, for example I know the right way to deliver and I can tell if someone is not doing it right. When I propose ideas in the unit I see colleagues taking them positively.

LYN-2: E1: I now make decisions before submitting to the higher authorities.

LYF-2: E1: My level of confidence expressing my opinion has changed positively. Before joining Aga Khan University I could not challenge a doctor's opinion even when I felt it was questionable, but now I make my opinion known. We discuss and reach a decision that is informed. I used not to make decision of my own, I would wait for a doctor, but now even when the doctor is not there have I take the right decisions.

Two respondents reported that they were now inspiring colleagues to go back to study and had become role models.

EON-4: E1: Before then my relationships with colleagues was good, yes but today and in the last 2 years, I guess it has become stronger because they look at me as someone who has improved in my career and they basically want to see that change in me. If you conduct yourself as a role model, you will inspire people so that they change.

EON-5: E1: People are envying the programme. The way we do our things, they thought it was all about the same pelvis but now they have realized it is totally different. Very many people have decided to train. Actually, about half of the work colleagues are going to do a bachelor's degree.

Stories of negative change in the professional relationships domain:

The dominant negative story of change in this domain related to the graduate midwives facing resentment and jealousy from colleagues. This was because they felt threatened by the graduates' increased levels of skills and knowledge. These changes were indirectly attributable to AKU, as they were driven by graduating from the university. The quotations below show the degree of prejudice faced by the midwives, but also paint a picture of resilience and determination to win their colleagues round by undertaking their role as a midwife to the best of their ability.

EOF-3: E1: There are changes in the way we work together, we do have ups and downs and these come because there are those who appreciate in the positive way and some in the negative way. They look at you as a threat; for example, if you bring in something new, some will say is it because you have a degree? The ups are those that have appreciated it in the positive way by doing what you tell them. Because of the result that comes out, the people are able to transform and do what I have taught them...I think it's because of the capability and the knowledge that I have.

EON-5: E1: I have not had any problem with anybody except a few who think when we went for bachelor's we are going to take their positions. There are those that are envying us because we have managed to attain that qualification.

LYN-1: E1: The way my colleagues look at me they feel that maybe I am going to be above them with time mainly because they now know I have a bachelor's. My colleagues say that whatever we studied at the diploma level, for them they feel it is the same at the bachelor's level so for them they feel there is no change yet there is a great change from diploma to the bachelors.

LYN-2: E1: I still have good relationships with colleagues in their different capacities. Some think that I am superior because I have a degree, while there are those who appreciate the fact that I have additional knowledge that they have and seek to learn from me. Going back to school, I have the confidence of my supervisors and colleagues.

LYF-1: E1: When I completed my bachelor's degree I think I my supervisor thought I had become a threat to her. She kept saying that I was doing whatever I could do to undermine her because I had a degree. With my immediate supervisor, I continued to do my work and report to her. So, despite her criticism, I continued to do my work without allowing that to degenerate into a conflict.

LYF-2: E1: As a graduate midwife these some colleagues tend to shy away from me. In a way I don't get their views because they seem to look at me as one who knows more than what they know and actually it's a challenge even when I am telling them the right things to do, they think I am bothering.

Stories of positive change in the confidence in role domain:

Similar to the stories of change reported in the professional relationships domain, the most frequently cited changes in the confidence in role domain centred around increased confidence, both personally and professionally, derived from completing the BScM and gaining improved skills and knowledge. These changes were directly attributable to AKU. The increased self-confidence was coupled with a higher level of confidence in clinical decision-making, voicing medical opinions and interacting with colleagues (particularly discussing treatment options with doctors) and an improved ability to perform day-to-day work. The quotations below illustrate this story of change in its component parts.

Thirteen of the 14 midwives reported feeling increased confidence after undertaking AKU BScM, which resulted in a variety of additional outcomes including being better able to perform their jobs, practicing patient centred care, feeling more confident interacting with colleagues and being better able to handle disputes and conflicts at work. One respondent also reported presenting with ease at conferences.

EON-2: D4: My confidence levels are so high; if it was at 20 before, am now at 90. When were at Aga Khan, they taught us to do so many things. They taught us especially how to present and they had a marking guide; they were marking the smartness, the way we interact, the mannerism, the voice, all those things were marked. At first of course it was not good but as time went on, I improved and with time the confidence levels improved. Now I am capable of presenting; I presented in Nairobi, I presented in a midwives' symposium my abstract which I developed in Aga Khan without shaking, but before when I was told to present even in front of my classmates the confidence would go down and I would shake. What makes me more confident is when I am told to present on something I see other presenters reading from papers but for me I use slides, and the audience appreciates my presentation.

EON-1: D4/D6: I can now stand on my own and make informed decisions after conducting an assessment on a pregnant mother. I can identify those at risk and give the right treatment and even refer the mothers to Arua Regional Referral Hospital. If they are refugees we first communicate to the coordinator of refugees who is stationed at the hospital in order for him to organise all the necessary equipment needed to treat the person, but for the nationals you refer enough. Like I said earlier, Aga Khan is not like these other universities where you are left to go alone for clinical; in this particular university, you go with your faculties who help you in case you fail. They are always there to provide guidance in case of hardships. I can decide on the condition of a mother and a baby on my own without consulting anybody because I have the knowledge and skills gained from my university training and the experience I have attained through practicing midwifery and I apply them in my daily work.

EON-4: D3: Believing in myself, I believe I am capable and responsible for any decisions that I make whether right or wrong. I am accountable because if something goes wrong I can stand in and defend myself. The way I do things in clinical areas like monitoring a mother in labour, I am able to support the mother after delivery because this is what I am supposed to do and I handle them every day and the information I have given to the other is the same information I give to this one. As midwives we are supposed to give health education and I don't think if you continue doing the same thing every day, I don't think you can forget because you give the same information so that means you are not shaky when giving the information even without looking at the paper.

LYN-4: D1: Before, they used to give me the posts like for example the roles of being an in-charge but I couldn't accept them because I didn't have that confidence in me, but my degree I've gained the confidence I think I can take up the roles.

LYF-2: D4: My confidence has really changed. These are the things I used not to know, I used not to do, for example like presentation, I didn't know, but now today I sit and make my presentation and I stand to present it nationally and internationally. I was well trained Aga Khan University, they gave me good knowledge.

LYF-1: D4: When I am going to teach, I prepare myself following the way I was taught at the university and then I stand confidently to teach colleagues. When I was still at the university, we used to have presentations and we could get feedback from the colleagues and lecturers and this improved my confidence so much.

LYN-3: D1: When I was doing the degree course, my colleagues would ask me, which course are you doing? I told her I am doing a degree in midwifery, then they would ask me, are you going to deliver babies through the mouth? They would discourage me that there is nothing new I was learning—midwifery will stay midwifery. Such comments would make me doubt the importance of the degree at the start. Then, some of the doctors would ask me, are you able to carry out caesarean sections? I would be scared to consult such a doctor—this would put me on tension in case I was working with this particular consultant on a patient fearing to make a mistake. I became resilient. Also, my supervisor informed my colleagues that having a more knowledgeable person in the unit improves performance. They have since appreciated me.

EOF-2: D1/D3: I told you that at Aga Khan they empower you with knowledge, skill and self-esteem to stand out and do the right procedures. I attribute it to the programme I went through at university. It's the course I undertook. When I am at work, I produce results which are visible; I don't need to explain so much.

EON-5: D3: I know what I am doing. I am confident in all that I do. You know medicine and medical practice are very dynamic, the more training you get the more skills and knowledge you get and the better way you can manage your clients.

LYN-1: D4: An example of a work experience that made me feel more confident is that now I am working on the ward where mothers have problems with pressure, so when they transfer a mother from the unit I welcome the mother and I give all the treatment. I am even able to give that magnesium sulphate—before I used not to give and I never knew how we were supposed to give it, but now I am able to give. I know what it means and then I know what it contains so that one makes me to be confident in that management.

EOF03: D1: I was not empowered but now I know I am. For example, if a doctor mentions something that I know is not right I will firmly offer my opinion as an alternative for him to consider...I understood my role as a good and professional midwife from the university.

LYF-2: D4: Conflict resolution at work, it happens at work but sometimes we've been ignoring it I would even not know what to do and sometimes I would leave it to whom it may concern, now I take it on. We work as a team.

Five midwives stated that they were more confident not only in themselves, but also in their clinical decision making, which made them more assertive when interacting with colleagues and challenging clinical decisions with which they did not agree.

EON-3: D1: I am very confident in performing the procedures that I have to where I have the equipment. I do not over consult these days...[I am confident] handling the pregnant women, offering family planning, conducting deliveries and resuscitation of the baby...During antenatal there was a mother who had a very big tummy. On my examination I was anticipating a multiple pregnancy. I referred this mother to be scanned and it came out to be so, and they were all lying abnormally. With my experience I was able to confirm that and then the scan also confirmed it.

EON-4: D1: My role is to deal with normal births as a midwife and the doctor deals with complicated births, but I have to ensure that this mother moves on well to get a normal birth. If I have identified a complication, I make a decision there and then and inform the consultant that I have assessed this mother and there is no possibility that she is going to give a normal birth. Therefore I would suggest, come and review this patient before we take her for a caesarean section and they actually take my advice. Because of the university training I got my colleagues know that I'm well trained.

EOF-3: D1: An example of where I am more confident in my work was when a mother came who had pre-eclampsia and the doctor decided to do a C-section but I told him no because we had no facilities for premature births, and on top of that the mother was still in the stage of monitoring—stage A. When the doctor refused to agree I brought him the manuals and proved to him. She was at 32 weeks, the blood pressure well controlled so I stood firmly and told the doctor no. The second scenario was with the shoulder dystocia, when a doctor was called he said that you arrange for a C-section so what I did was to transform what I was taught at Aga Khan, I did it and the mother delivered. The doctor said the mother had her complications and that I forced her to push. I just told him that there are other mechanisms that we follow and the baby comes out, we monitored her for 3 days and the mother was okay.

EON-5: D1: I am very confident, if a patient needs to do a 3D scan it has to be done I can't shy away that this one

needs a doctor. If at all it needs investigating she will find when I have done the 3D scan and I have results to discuss with the doctor. When I am doing something now I know how to back it up, during that time we used to think skin-to-skin was for the premature babies but after getting training from Aga Khan I learned that you can do skin to skin even when they are doing an operation. These days when I am to receive a baby I make sure I talk to the mother and we do skin-to-skin and when I used to do it in theatre the doctors thought this is very exceptional. This is being done in America and my word was it can be done here not only in America we can do it here and whenever they go to the theatre they said we want the other sister to come and see the babies. So whenever you are confident and you can do something and you can back it up. Now there is no way a doctor or a colleague can mislead me to do something for a patient that is not supposed to be done.

LYN-4: D4: I am able to see the baby's condition then take the responsibility of taking care of the baby and to see what I should do for the baby confidently. If I need to inform the doctor, I do so and I also take part in the management. Not like those days when doctor would just say and you agree, here you can disagree and say no doctor it should be done the other way.

Stories of negative change in the confidence in the role domain:

Few negative changes were reported in this domain. One midwife (EON-3) reported feeling less confident in being able to perform her job effectively because of the lack of equipment. Another midwife (EOF-3) reported one instance of feeling undermined when a doctor challenged the way she had treated a patient in front of the patient and her family. Three graduate midwives spoke about gaps in their knowledge on various subjects, which undermined their confidence to some extent.

EON-4: D1: I am not very knowledgeable in neonatal care, yet I deal basically with the mother and baby. Here within the first 24 or 72 hours I am required to identify babies with complications and refer them for advanced care to the neonatal unit. Sometimes I'm called to reinforce, but I tell them don't try me.

EON-2: D4: Writing is still my challenge since I am working in clinical and research areas. I need to improve my scientific writing skills. I see colleagues going for conferences after writing abstracts from their day-to-day work, so that's what [I] am working on.

EOF-2: D1: In this program [midwifery degree] we don't do much of pharmacology so at one point I was asked some mechanism of action, which I cannot go into details now. I told them what I knew, but I was sketchy and lacked details of pharmacology.

Stories of positive change in the personal relationships domain:

A variety of stories of positive change were reported by respondents in the personal relationships domain, most of which related to feeling more supported. These were split between friendships with peers and improved relationships within the family.

Several midwives talked about feeling supported personally and professional by their AKU year-group peers even though they did not see each other often or live near each other.

EOF-1: F1: [My peers] have been supportive and even they are more supportive now. I've been supportive to everybody and I still do because all those who went back to school, it's me who supported them to go back and they still consult me for anything they find at school and always I will if am available unless I held up. They have helped me to keep updated when I share and mentor them. I feel they have upgraded me; I've kept updated as I teach and mentor them. They are happy for me. The way I carry myself, I don't show a difference between them with diplomas and me have a degree.

EON-2: F1: I am proud of what I am and I really share what I know with them. [My peers] do support but it depends, there are some people if their confidence levels are low, they feel they cannot support you yet there is nobody who knows it all. Being supported I can say especially when we have challenges I appreciate that there are some people who know better than me so I seek their support. Supporting can be financial social, physical. I support and they also support me depending on the situation.

EON-5: F1: When it comes to professional development with our cohort I have liked the way we support each other. When I have anything that concerns my profession or midwifery and I share it with any of them, they are really very supportive. For example, if I have training to conduct and I need someone to back me up, I call on some of them to be my co-facilitators.

Even my colleagues who work with NGOs, when they need trainers in my areas they call on me. We also support each

other emotionally, physically, give each other company. I also support them whenever they call on me for guidance, training and emotional support in case of a personal issue. We talk to each other and solve one another's problem. I know there are people to talk to and people to share with when it comes to solving problems.

EOF-3: F1: If there is something that is not going on well and I tell them [my peers] to back me up and they do. Now we are at the district level but if there was an issue in my facility, it is a matter of calling my colleagues and give them guidance on what to do and they will handle.

Most graduate midwives spoke about the improvement they had seen in family relationships.

LYN-1: F4: On the graduation day when my husband came at Serena hotel, he appreciated it. Before the way he was seeing it was something not good on his side because I never had time for him, but when he was invited for the graduation, he appreciated and even at our small party at home he also said he will support me even at masters level because now he has seen a change in me.

LYN-3: F4: I had a lot of issues with my partner. When I had just joined, I had a lot to handle; I had the two jobs, the man and the baby. I actually left his home and started staying at my sister's place but one of the faculties noticed that I would be absent minded in class, so she called me and I told her a few things though I never told her everything. She counselled me and I realised I needed this man in my life because he is the father of my child. I made it a point to go back to his home and make the marriage work and at the same time go through school and also have my jobs. When he saw me change he was like maybe they are teaching you something at the university. At first he wanted me to go to school but the challenge came when I did not have any time at home because the time I would be with him at home, I would use it to concentrate on school. After realising I had changed, he started supporting me and we would read together and this helped to draw us closer.

EOF-1: F4: Now my family members are even happy, they are supportive, they know my programme we share what is happening. If I am to wake up very early to go for a lecture they support me. Some give me tea, everyone is supportive, everyone was happy, every relative was happy for me. They do support me in anything. I have the responsibility of the family I have to just divide my time, this is school time, this is family time, this is bed time. I have support to move on smoothly. I have improved in my communication, effectively communicating to them what is happening not leaving it to myself and just move because I communicate all my plans and programmes.

EOF-2: F4: The relationships with my family was partly disorganised because we had to take a lot time on school activities. I had less time for family with a lot of assignments to accomplish so I would fail to meet the family demands. I am now more grown and free. I am more supportive to my family than before.

LYF-2: F4: My family were affected because I was the one who was supporting them, but in the last 2 years they somehow suffered the consequences of me being away from them but they persevered. I struggled a lot to study and complete as my family was suffering. My family was affected in that they were not to see me for those 2 years and the support I used to give them would not be the same, but when I finished, things went back to normal so we are okay now. It's because I took a step and said 'no I can't remain the same', so I made a decision to go and do this degree. It was not very easy for my family especially my husband and in-laws when I was away for 2 years, but now we are together again.

LYF-1: F4: The last 2 years when I was at school of course it affected my family because I wasn't giving them time. I could leave the university with coursework to and you have to complete it so I had to ignore some home issues—not because I intended it but I had pressure of the things I wanted to fulfil. I denied them some of the things—the love and care I used to give them was not enough but now when I am through with my day's work I just go home to my children.

LYN-3: F4: I will start with my child; I had just almost had her before I went to school because she was 2 years but I would even take 4 days before going home but now I maintain the bond.

Some respondents explained that their experiences of obtaining a degree were now inspiring their children and other family members to strive to achieve their own dreams and goals.

EON-3: F4: When I was at school I didn't have time for my family especially my daughter was the one keeping home but right now when she is at home and mummy is around she is so happy. She also felt so good when she saw me graduate, she is also promising me to read books and it has encouraged her so much, and my sister who is a teacher but she was telling me on my graduation day that she wants to change to nursing now according to the way she

saw me graduate. It was a very colourful function and a big achievement in my life. All my relatives were so excited, including my mother.

LYF-4: F4: My relationships with my family changed in a better way because they now see me at a higher level of a degree, they consult me and at least they don't leave me behind. In case of any decision making, I am much more involved in decision making than before going back to school.

EON-4: F4: There are changes in terms of moral support in that I encourage them to work hard and achieve their goals. It has motivated them to move a step ahead and attain their desired goals like I did attain my degree.

EON-5: F4: The children are so impressed that their mother got a degree. They are so happy and when I told them I want to try teaching they were like mum you can teach! Actually, when I was in school they used to compete with me to see who was doing better. Up to today they want to impress me. I went with my son for my graduation and he told the others that do you know mummy was the best? Because of going to school everyone was so supportive in the family.

In addition, a number of participating midwives had encouraged their peers to go back and study following their positive experience of studying at AKU.

EON-4: F1: [My relationship with peers] It has changed for better because very many midwives who want to go back to school are consulting me, they give me calls say I want to share with you, how was the course, how is the bachelors process? So I've been sharing with them that it is so good and I have been encouraging them to do so.

LYF-1: F1: I have actually advised some of my colleagues to get back to school.

LYF-2: F1: I encourage my colleagues to join university.

Stories of negative change in the personal relationships domain:

Few stories of negative changes were reported in the personal relationships domain. One midwife (EON-3) reported feeling isolated because she was unable to share her midwifery experiences with her friends and peers as they rarely met and she had no forum in which to promote the benefits of studying at AKU to other diploma midwives.

EON-3: F1: How about those that you don't work with? It is hard because we rarely meet together and I don't have a forum that we can get together and we share experiences or do certain things together...I feel isolated because my colleague who you met in Jinja, is not a staff in Jinja she is attached to another hospital so if I was in a better position where I can influence others I would have organised some meetings with most of the midwives and shared with them the beauty about going back to school and how you can be exemplary or exceptional.

Four graduate midwives spoke about deterioration in their personal relationships, particularly when their friends and peers felt threatened by their new degree qualification.

EON-4: F1: It has affected my peers in such a way that some of them feel inferior so they cannot associate with you because I am above them.

LYN-1: F1: Some of my peers have an inferiority complex because now to me they take me as a superior. The changes are based on the foundation I have of a bachelor's from Aga Khan University.

LYN-4: F1: Some peers are scared that maybe since I completed my bachelor's I will soon be taking their position of being an in-charge. Some peers don't support me because they see me as a scary person to them—something like a barrier so they don't support me they always want to put me at a lower level. People are still stuck in the old thinking of how we used to do things at the diploma level.

LYF-2: F1: Sometimes those I left behind look at me as being a far ahead of them and sometimes it's not easy. They look at me as far ahead of them so when it comes to care, they seem to look at me as having all so even when I ask them something they ask why we thought you had the best option? Some people as I told you, they look at me as someone far ahead of them the relationship has reduced than the way we used to interact because like someone would call you every day but time came when am too busy and were complaining of me not having time for them. The degree programme was so tight I could not have time to meander and even now that I completed am even thinking wider. I spend most of time exploring how to go about different issues in my profession so even the nature of work we have I work for a full week so sometimes this affects us.

Stories of positive change in the wellbeing domain:

The main changes reported in the wellbeing domain related to the skills the graduate midwives had developed during their training at AKU, specifically in relation to their ability to handle stress and cope with challenging and traumatic situations.

LYN-3: G1: [I] left my sisters place and went back to my husband's home. I had separated from him. The pressure was a lot and I did not want to lose any of my jobs because we had made an agreement that I was to pay my tuition from my salary, not a penny from his income. I had a baby who was to start school in a year's time and here was this man who needed my attention and I felt I could not handle the pressure and by leaving it just increased until I got counsel from one of the faculties.

LYF-2: G3: I have changed my thinking that I can really do anything no matter what, actually it was a lesson that I learnt how to cope, how to deal with anxiety and stress. It's the programme because our faculties could mentor us and they could even give us their own experiences and when you compare their experience you find that the one they had was even harder than what you are going through.

LYN-1: G3: In Aga Khan we were taught counselling skills and it is these skills that I used to counsel myself and also sharing with friends like my husband also helped me reduce on the stress level.

LYN-2: G3: There was a lot of stress when I had just joined school because the 2 days study and work programme there was a lot of work, assignments and I had to work also so the stress increased then. But after school the stress went down because now it's more of work so I can manage my work and home issues. I counselled myself using the skills I acquired during school time and also sharing with friends...I think it is because of sharing experiences with my friends who give me some coping methods they have ever used and also reading motivational books then also the counselling skills I got during my degree training so I counsel myself.

EOF-3: G3: When I face stress, I go back to what I was taught at Aga Khan University—root cause analysis, I ask yourself why is this happening? In quality improvement we do the root cause analysis, so I can control the anxiety if I am to understand the cause. We were taught how to handle the stress now. As long as I know the cause of the stress then I can easily handle or deal with it. I am calm irrespective of the pressure I face, I used not be like that tempers would go high. The reason is I learnt coping mechanisms from faculty Helen and Cindu.

LYN-4: G3: Going back to school I had to read, work and home and time really wasn't enough because as you know in Aga Khan I had to meet the deadlines for all schedules so it stressed me a lot. During the programme all my anxiety and stress levels increased to beyond repair, but I think now it's down. Having completed the programme I have nothing stressing me and the anxiety and stress have reduced. I learnt how to manage the stress because during the course, we were taught how to manage the time and the rest of the things that could cause stress. I learnt how to manage my time for work, school and the home so the stress decreased. With the help of our faculties who used to counsel us and shared experiences, I learnt how to cope up with the stress so the coping mechanisms changed. The skills I acquired during the programme at the university led to this change.

EON-4: G3: I am able to adjust to whatever challenge I come across in times of devising means on what I should do. The experiences that I have gone through during this academic period at Aga Khan made me to appreciate and cope up because if you don't cope up you cannot complete because you have to submit the assignments on time. I had to plan my time and have objectives and make sure I meet them every day.

EONF-2: G3: My anxiety and stress levels have changed in that they are now less I can now manage them better than before. In fact this training was stressful but the stress I went through when I was in school can't be compared to the work stress so this one is really less that I can stand it. I think stress and anxiety move together you get stressed and become anxious so I can say this is now less. I think the way I cope with stress has changed. If I get any issue that stresses me and it has a solution I work towards the solution. If there is no solution still I refer it to someone who can handle it. It is because I went through a stressful experience, adjusted and became stress resistant.

LYN-2: G4: Before school actually I was less exposed to traumatic situations and I would fear, for example seeing a mother die but after school, I gained confidence in dealing with such cases plus the counselling skills I got from Aga Khan I am now able to counsel myself as well as encourage the relative of this mother to accept the situation and then I also share with colleagues.

LYN-4: G4: Having attended courses during the upgrading time I acquired skills, which I apply at my workplace. With counselling skills I can deal with traumatic events so I think it changed after attaining the degree. I think it has changed because back in those days we used to be left behind, maybe we didn't know what to do but after attaining a degree now I know that I have to get involved in each and everything so in all those traumatic cases am involved and I know

how to deal with them, so I think it has changed. In the past, I would fear whenever doctors could come and tell the mother that maybe the baby is in a very critical condition and the baby could not make it. I could fear hearing on such I never wanted them to mention such, but now I know you have to counsel the mother to tell her the condition of the baby. I now cope. The reason for this is that I went back to school where I attained courses like counselling which help in dealing with traumatic cases.

EON-4: G3: I am able to adjust to whatever challenge I come across in times of devising means on what I should do. The experiences that I have gone through during this academic period at Aga Khan made me to appreciate and cope up because if you don't cope up you cannot complete because you have to submit the assignments on time. I had to plan my time and have objectives and make sure I meet them every day.

EON-3: G4: When I was at Aga Khan, by the time we were in clinicals in Kawempe hospital we saw mothers almost rupturing on the ward and I was so traumatised during that time. I accept some outcomes when they are beyond my control. I communicate well at each level. When a mother loses a baby, I encourage them, but because I have communicated to them throughout, they understand that I tried my best to save life. Communication has helped me to cope with traumatic events. I can cope because I have the skill and because I've seen people go through the same and experience that I have gone through and sharing with other people.

A variety of skills learned through training at AKU had transferred into respondents' personal lives, including improved critical thinking and being able to handle money more effectively.

LYN-3: G6: The main reason my wellbeing has improved is because I can think deeper. I have had those pieces of land and I could not put them to use but now I have started to put them to use. The people I have interacted with who have encouraged me to have a side income besides my monthly salary have prompted this deeper thinking. When they teach us about critical thinking in class, it should not be only in line with your profession but also other areas of life like economic and social.

LYN-4: G1: I think it has changed because now I can see the most important things and I spend on those and the less important I leave so I take priorities in my spending decisions. I think having gone back to school I can now think critically and know what's better and what's the most important and what is the least important.

EON-3: G1: Before, I could just get money go to market and shop, this time I have to sit and prioritise. I used to spend on leisure and forget the basics so this time I prioritise my budget. I was exposed to many modules during my degree training and I learnt that I have to mind the spending not just to spend but I spend when I have to, the course was demanding financially, I had to learn some of these basics to survive.

EON-4: G1: I had too many responsibilities where I needed to balance the little that I have because I need to meet all my needs and if my sponsor was not there to support me I would have dropped out [of AKU] because I couldn't have managed to meet all my expenses.

EON-5: G1: I used to have that impulsive shopping, I would go to the supermarket and buy things for over 300,000Ush. I buy sweets, chocolates and I keep them in the house. Whoever would please me I would give them a sweet but now my salary comes and stay in the account for 2 months when I am having a plan for it—I have learned how to save. I no longer do that impulsive shopping, I only spend money on important things. I have to plan for other things; I am planning to go back to school. I also have to save for school fees for children.

Several respondents spoke about having an improved work-life balance now that they had graduated from AKU.

EON-3: G2: The time I was at school I was over strained and I would not balance my duties very well but right now I have all the time I can manage my time properly. Right now I have time for home, time for work and time for my family.

EON-4: G2: I try to apportion my time between family and work, I need to keep both of them, I need my job and I need my children to succeed. Now once I leave duty I go home and when I am off duty I am at home but the other time when I would be off duty, I will be at school to read [and] discuss with colleagues. I completed school and now I have two areas, work and home but before I also had school.

EONF-2: G1: Now that I am out of school I balance my time otherwise before it was too much, I could work more time to earn time off for school.

LYN-1: G3: During the school time I had to fulfil all the school schedules and at the same time I had to work so I hardly

slept but now that I finished, I have more time for my sleep and because I get home when I am so tired, I totally sleep so I may not have the time to think of what to do the next day or what I have not done on that day.

LYN-3: G2: I actually spend more time at home. Before I would go in the cinema and watch movies besides school but now each free time I find, I spend it home with my family members. One of the reasons for this is that I realised that having a happy family is a key to success because it is the family that supports you and there have it has to be happy.

LYN-2: G3: There was a lot of stress when I had just joined school because the 2 days study and work programme there was a lot of work, assignments and I had to work also so the stress increased then. But after school the stress went down because now it's more of work so I can manage my work and home issues. I counselled myself using the skills I acquired during school time and also sharing with friends...I think it is because of sharing experiences with my friends who give me some coping methods they have ever used and also reading motivational books then also the counselling skills I got during my degree training.

LYF-1: G1: Next to where I live there are women whom I socialise with, but before I used not to because I was more attached to books and work, but now that I am free from books we can move around. I can balance well my duties now. I have started my projects on piggery, poultry and a garden at home.

LYF-1: G2: I learned that I can do more than one thing and balance. You see I did not want to lose any of them; that is, school, job or family, so I had to make sure I try to balance.

Overall, respondents reported feeling more supported in their lives, particularly by their university cohort. Several graduate midwives spoke about the support they gave and received on both personal and professional levels via the QuIP WhatsApp group their year group had established:

EON-3: G3: My anxiety and stress has changed especially before we finished, before our graduation, I was so stressed because I had a lot of money I had not paid to the university, but it went down thereafter. The increasing workload place can be stressful. Now I know how to handle stress, if I see something that will stress me I discuss it with others and let it go I can no longer own problems alone. My mind is now at peace I know that I don't have anything over pressing me apart from looking for finance but the rest is fine. When I get anything stressing me or giving me much anxiety I can always have a solution by either meeting that person or talking about it or sharing it with someone and then we see how we can handle it. I am a counsellor and I have learnt to be accommodating and I open to let go of the pressure. I learnt that I cannot empower someone to cope with a situation when I cannot do it for myself.

EON-2: G4: At least I have to thank God that most of the people I work with are friends to me I try to be friends to people—it's very difficult to work where I do and have an enemy. I share the traumatic experiences—at least we share if I have a big problem and it affects me less than when I handle it alone. I share with my colleagues to appreciate what we've gone through so it is less. Communication skills I got from Aga Khan on why things happen, the way they happen, helps me in communicating better to giving hope.

EON-5: G3: We have WhatsApp group, so whenever I am stressed I find a video to watch from the group or I watch some small funny things on YouTube and eventually the stress gets off and I start up again. I communicate to colleagues where I need help. Those Aga Khan people are dotcom people so I send them an email or WhatsApp.

LYN-1: G4: The way I cope with challenging situations has changed a bit. At least we now have some partial team work unlike before and in addition to team work, I also do counsel myself, the patients and also the relatives using the skills I acquired and then also sharing it with your friends and not leaving it to yourself alone. The reason for this change is the skills in counselling that I got while at Aga Khan and also sharing experiences with my colleagues and our faculties.

LYN-2: G4: Before school actually I was less exposed to traumatic situations and I would fear, for example seeing a mother die, but after school, I gained confidence in dealing with such cases plus the counselling skills I got from Aga Khan. I am now able to counsel myself as well as encourage the relative of this mother to accept the situation and then I also share with colleagues.

Stories of negative change in the wellbeing domain:

Two stories of negative changes dominated in the wellbeing domain. The first, which was directly attributable to AKU, was the fact that several graduate midwives were still in debt as they had been unable to pay their fees for the BScM course. This resulted in them being unable to apply for jobs as they had not yet received their transcripts, or having to work more than one job to earn enough income to pay off their debt.

EON-3: G1: Right now, I've not cleared my balance with Aga Khan so I am looking forward to clearing that balance so that am able to acquire my paper for better job.

EOF-1: G2: Nothing I spend on more because I still have a debt to pay at Aga Khan so I've not had anything that is although a am not studying any more, I still have a debt so nothing I am spending on less. I have added in so much as income has increased income, still the outlets increased somehow...I am still also paying money, to Aga Khan, I have not finished my tuition.

LYN-4: G1: Because I was spending a lot on tuition and that money was a lot and I had to borrow so am spending more by refunding the money I used for tuition.

LYF-2: G2: Most of the time I leave home at 6 am the earliest time I report home is 9 pm in the evening. By the time I completed this course I had a lot of debts so I have to work hard here and there to make sure that I pay all these debts that I have.

The second negative story of change in the wellbeing domain related to increased workload, responsibilities and stress in their jobs after graduation, which resulted in some respondents spending less time at home.

LYN-4: G2: I spend less time at home because as I have told you that my workload is a lot, I make sure leave home early and get back home late so that I try to accomplish all those duties that am assigned to. It's because of upgrading my level of education now they know I know a lot more than they do. Now I don't have time for myself, I no longer have time for leisure.

LYN-2: G2: I have more than one job so I spend more time on jobs than for myself. My workload has increased now. I spend less time at home because I have to spend more time at work. During school time I hardly had time for home, I would have books and work consume most of my time. It's because I used to have one job, but now I have more than one and more responsibility is being added on me.

LYN-3: G3: One of the reasons for the increased stress is more workload and some stresses from some people who are afraid of me like my supervisors in both hospitals. Nowadays I sleep less since I have three jobs including the home nursing one since she gives me good money because if I work at her place for 5 days, I would actually earn the money I am earning at the public hospital per month plus 200,000US\$/=. I even sleep less compared to when I was in school.

EOF-3: G2: Because of the work I have so I even spend less time at home. It is even less than when I was at the university because I have a lot of responsibilities now. Because I graduated and demonstrated better skills and performance, it has earned me more responsibilities. The workload is increasing because now we have more paperwork that we have to do on top of the mothers. After working on a mother you have four to five registers you are supposed to write in so by the end of the day you feel tired and exhausted because if you do not finish one then there will be a blockage in one and there will be inaccuracy, so the workload is there.

Stories of positive change in the career prospects and plans for the future domain

The overwhelming story of positive change in the future career domain was that all 14 midwives reported having higher aspirations for their careers and a greater commitment to moving forwards in their profession. Completing a degree at AKU increased their skills and knowledge and improved their self-confidence, painting a positive picture for the future.

EON-2: H1: They've changed because after acquiring my bachelor's degree in midwifery there are so many people talking to me about job opportunities, going for MPH. But for me I want to focus on maternal health, so I have a lot of opportunities but am still waiting for that opportunity of maternal health, I want to go in that line to master maternal and child health not in public health it is also a good course but I want to concentrate in maternal and child health. You know people think that being on the ward doing clinical area that's the only way we can help these mothers but also when you go to another level like teaching, policy making or research can also improve our lives.

EON-4: H1: There likely opportunities that we will join the National Maternal and Neonatal Specialised Hospital. It has been mooted that only graduate midwives will be recruited in that hospital when it is completed. Our colleagues already tell us that we are the ones set to go join. I also hope overall that I will take up better paying jobs in future.

LYF-1: H: I have added some papers which is a degree in midwifery. The way I am doing my midwifery practice now has changed and I can even help students now, the staff I can mentor using the evidence-based practices. I can say I expect more promotions. The reasons for the change is that I went back to school, got the competence, skills and knowledge. In addition, the support of the faculties to help us improve our careers and when I see them with their

qualifications I feel that I should also be like them. Most of them had masters and PHD and I felt that I should be like them.

LYF-2: H1: I thought I was going to have a diploma and never imagined I will ever have a degree in my life. Now that I have a degree, I really need to go for masters, I really need to go for other courses. Maybe I should go for research. So I really look at so many opportunities to improve, even to develop my career. I now see that my opportunities are many.

LUN-2: H1: I believe the more I climb a ladder the more the space because I believe there are very many people who have diplomas compared to those who have degrees in midwifery and I am looking forward. Mulago Hospital is soon opening a fertility centre. I believe they will want degree nurses and even abroad there are countries which want degree holders compared to diplomas so I think career opportunities are there for me.

LYN-4: H1: Now that I have moved on to another level of having a degree, I now have more chances to upgrade my career. For example one; the opportunity of the in-charge role, secondly I was given an opportunity to go overseas for [my] masters and for free, but it is not yet due. Then also the neonatologist gave me an opportunity to work hand in hand with her in her research so I think there are very many opportunities. The people who know that I've attained a degree in midwifery, they are opting to give me more roles. The reason is me going back to school and attaining a degree in midwifery.

EOF-1: H1: There many opportunities because I am among the few who have the degree in midwifery. After attaining my degree, I have chances to proceed and upgrade my career. Very many opportunities but I put them on hold because of lack of funds. It's because I'm one of the few midwives at the hospital with a degree and highly skilled.

LYN-1: H1: My career opportunities have changed because now I have bachelors so I can go and apply for any job as long as it requires the qualifications that I attained in my bachelor's. After getting this bachelor's, I can now see more opportunities for development of my career.

EON-5: H2: I have never dreamt of being a nurse—all I wanted was midwifery but then midwifery never had that career path of upgrading but now that the career path has been opened I am just going to take that path to the highest level. The career path has been set now at least we know where we are going now.

EON-4: H2: There are many opportunities looking at my career path because I am looking at my level taking up the leadership role, being an advocate because I stand a chance so long as I'm outstanding.

LYN-3: H2: The degree gives me a boost in the profession and the more years I add on the better the experience. By me having a degree I am able to compete for jobs that need the degree qualification which gives me the confidence in future career opportunities and I stand a better chance than those in my career who have not attained a degree. The fact that I went back to school and got the knowledge and I am putting it to use is the reason for this change. That is all.

LYN-4: H2: I see I have more opportunities, more people are coming up with more opinions, so I think I have more opportunities in future.

EOF-2: H4: Even currently in last week's advertisement, they were advertised for midwives with degrees so I see myself there even when I go back to work I can stand better chances to get a promotion than someone who didn't go back to school.

LYF-2: H4: Since I am a degree midwife, any opportunity that comes now today, let's say they want a lady with a degree in midwife, I will be the first person to be taken up and am just very happy that even in Uganda if they call for the qualified midwives who trained here in Uganda, we shall only be 15.

As well as having more opportunities to further their careers, most graduate midwives spoke about having a deeper commitment to their profession and higher aspirations for the future, including undertaking post-graduate study.

EON-1: H1: My career opportunities have changed because before I had thought of doing masters in another field like public health but after my course I decided to upgrade in my field because I want to become a consultant soon and diverting careers it might take me a long time to become one. My degree programme changed my focus, now I need to attain a given level where I can become a specialist or a consultant in the area of midwifery.

EON-5: H2: I feel very different about my career opportunities. When I went for that bachelor's degree I didn't know why I was doing it. I just had that passion for midwifery, I just love my profession so when that programme had just started in Aga Khan I read about it in papers, when I went to consult in 2014 I was asked if I would be able to finance myself to go to Pakistan where it was being run from, I was not able. They told me to wait they would communicate to it starts in Uganda. I am now planning to do my masters and PhD. I have seen people who have got PhD in midwifery and they are doing very well and I can do it I think. If at all Aga Khan had a master's because I don't want to just do it. The way Makerere teaches I don't like it, it's very expensive and it's full time.

LYN-2: H2: I feel I need to go back to school for masters in midwifery as soon as possible. With my diploma in comprehensive nursing I felt I didn't have the right path way but now that I completely went to the midwifery side, I now see a straight path for my future career opportunities. I feel more confident that now I've chosen the right path in that I have now completed the degree and looking at having a master and a PHD in midwifery. I feel proud to be in the midwifery field.

EON-2: H1: I want to master in maternal health, maybe another opportunity as I told you before is to improve on my research and am going for a course in principles of research for 1 month and I think also it will improve on my career. You know if you want to start something, you have to start from somewhere, so the changes are there because am somewhere because those opportunities cannot be given to someone with a certificate they are given to someone with a with a degree that's what am saying am somewhere so the opportunities start from somewhere. There likely opportunities that we will join the National Maternal and Neonatal Specialised Hospital. It has been mooted that only graduate midwives will be recruited in that hospital when it is completed. Our colleagues already tell us that we are the ones set to go join. I also hope overall that I will take up better paying jobs in future.

LYF-2: H1: I thought I was going to have a diploma and never imagined I will ever have a degree in my life. Now that I have a degree, I really need to go for masters, I really need to go for other courses. Maybe I should go for research. So I really look at so many opportunities to improve, even to develop my career. I now see that my opportunities are many.

LYN-2: H1: I believe the more I climb a ladder the more the space because I believe there are very many people who have diplomas compared to those who have degrees in midwifery and I am looking forward. Mulago Hospital is soon opening a fertility centre. I believe they will want degree nurses and even abroad there are countries which want degree holders compared to diplomas so I think career opportunities are there for me.

LYN-4: H1: Now that I have moved on to another level of having a degree, I now have more chances to upgrade my career. For example one; the opportunity of the in-charge role, secondly I was given an opportunity to go overseas for masters and for free, but it is not yet due. Then also the neonatologist gave me an opportunity to work hand in hand with her in her research so I think there are very many opportunities. The reason is me going back to school and attaining a degree in midwifery.

EON-1: H1: My career opportunities have changed because before I had thought of doing masters in another field like public health but after my course I decided to upgrade in my field because I want to become a consultant soon and diverting careers it might take me a long time to become one. My degree programme changed my focus, now I need to attain a given level where I can become a specialist or a consultant in the area of midwifery.

EON-2: H1: They've changed because after acquiring my bachelors degree in midwifery there are so many people talking to me about job opportunities...as I told you before is to improve on my research and am going for a course in principles of research for 1 month and I think also it will improve on my career.

LYF-2: H2: I want to be straight in maternal and child health because of my love and passion is midwifery having gotten a degree in midwifery, it's my first step to take me high and higher. It's because we have gotten people with experience like doctor Grace who inspires me a lot, the love she has for her profession. If I could be on the level that she is on it would be superb.

EON-4: H2: There are many opportunities looking at my career path because I am looking at my level taking up the leadership role, being an advocate because I stand a chance so long as I'm outstanding.

LYN-3: H2: The degree gives me a boost in the profession and the more years I add on the better the experience. By me having a degree I am able to compete for jobs that need the degree qualification which gives me the confidence in future career opportunities and I stand a better chance than those in my career who have not attained a degree. The fact that I went back to school and got the knowledge and I am putting it to use is the reason for this change.

That is all.

EON-5: H2: I feel very different about my career opportunities. When I went for that bachelor's degree I didn't know why I was doing it. I just had that passion for midwifery, I just love my profession so when that programme had just started in Aga Khan I read about it in papers, when I went to consult in 2014 I was asked if I would be able to finance myself to go to Pakistan where it was being run from, I was not able. They told me to wait they would communicate to it starts in Uganda. I am now planning to do my masters and PhD. I have seen people who have got a PhD in midwifery and they are doing very well and I can do it I think. The way Makerere teaches I don't like it, it's very expensive and it's full time.

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EON-1: H2: I had plans that after midwifery I go for master's in public health or health management but later, I decided to continue with my midwifery. By the time I completed the course I had decided to continue with this profession since it is what I want to specialise in. There are some people who have inspired me among our faculties, there is one who started as a midwife but later did master's in midwifery.

EON-1: H2: I have plans of developing professionally whether I will still be employed or employing myself. I have added on more knowledge that should not be sat on but put to use. I cannot keep earning a salary of a diploma holder when I have a degree. The reason I went to school was to bring a change in my midwifery career and improve my wellbeing. I also want to be happy as I am making other people happy.

EOF-2: H4: Even currently in last week's advertisement, they were advertised for midwives with degrees so I see myself there even when I go back to work I can stand better chances to get a promotion than someone who didn't go back to school.

LYF-2: H4: Since I am a degree midwife, any opportunity that comes now today, let's say they want a lady with a degree in midwife, I will be the first person to be taken up and am just very happy that even in Uganda if they call for the qualified midwives who trained here in Uganda, we shall only be 15.

In addition, several graduate midwives were inspired by staff members at AKU, holding them up as role models.

EON-1: H2: I had plans that after midwifery I go for master's in public health or health management but later, I decided to continue with my midwifery. By the time I completed the course I had decided to continue with this profession since it is what I want to specialize in. There are some people who have inspired me among our faculties, there is one who started as a midwife but later did master's in midwifery.

EON-5: H4: The training I got during my degree training has opened my eyes, I don't look at having the job only but having broader skills. With a bachelor's degree now I know how a midwife can do research. I am planning to do more, I want to be a policy maker in midwifery. I want to become a midwifery consultant. If others can why not me?

LYN-2: H1: Having gone back to school and done the bachelors, I got inspired especially by doctor Grace having a PHD in midwifery; I feel I also want to be like her.

LYF-1: H1: I have added some papers which is a degree in midwifery. The way I am doing my midwifery practice now has changed and I can even help students now, the staff I can mentor using the evidence-based practices. I can say I expect more promotions. The reasons for the change is that I went back to school, got the competence, skills and knowledge. In addition, the support of the faculties to help us improve our careers and when I see them with their qualifications I feel that I should also be like them. Most of them had masters and PHD and I felt that I should be like them.

LYF-2: H1: I want to be straight in maternal and child health because of my love and passion is midwifery having gotten a degree in midwifery, it's my first step to take me high and higher. It's because we have gotten people with experience like doctor Grace who inspires me a lot, the love she has for her profession. If I could be at the level that she is it would be superb.

Stories of negative change in the career prospects and plans for the future domain:

Only two stories of negative change were reported in the future career domain. One respondent (EOF-1) reported having to put her career aspirations on hold because of lack of funds even though there were a number of career opportunities available to her now that she was a graduate midwife. The second negative story of change was a result of having outstanding tuition fees with AKU, which meant the midwife was not able to pursue a more senior position.

LYN-2: H1: The opportunities have been there and doctor Grace has always said on our emails 'if you want to do masters in midwifery from somewhere else' but I have not been able to apply yet because I haven't cleared the tuition so I haven't picked my transcript, and to apply you first have to get your transcript.

Results from the WhatsApp group

As noted previously, the 14 graduate midwives interviewed developed their own unique community of practice and were supportive of each other using their own WhatsApp platform to advise and support each other professionally and personally, share experiences and promote job opportunities. The results from the 3-week WhatsApp follow-up reinforced the findings from the individual interviews and provided some additional depth, particularly in relation to changes in respondents' clinical practice, stress-reduction techniques and how they felt about being a degree-holding midwife.

The WhatsApp group showed that the midwives now viewed themselves as more confident and assertive at work, were consulted more frequently by colleagues and were better able to undertake their jobs as they had more skills and knowledge and were practicing evidence-based midwifery.

EOF-3: Many workmates consult me whenever necessary and trust me. We have become consultants at all levels.

LYF-2: After the university in terms of work I became assertive enough that I stand freely and argue out whatever is right and many workmates consult me whenever necessary.

EON-5: Though we were caring wholesomely for our clients before, we have greatly improved and now we do give quality care which has continuity and we do provide evidence-based interventions and at the end of it all normality is achieved.

EON-4: Practice-wise I am confident in whatever I do in terms of providing care, educating mothers on what to do, discussing care with consultants in regards to mothers in the facility has been of helpful in patient management. Sharing opinions and involving in the discussion has really motivated me.

EON-2: For this period of post training from Aga Khan, I can easily express myself in front many learned people, arguing out issues with rational reasoning. I do this in meetings, different forums and in writing. I can chair meetings physically, on Skype or Zoom. This was not the case before.

The midwives also talked about events that were happening at work, which showed increased mentoring and teaching as part and parcel of their professional lives, and increased confidence in these new leadership roles.

LYN-1: In fact, every day I go to work am happy because I'm confident of whatever case it may be because I can manage confidently based on the skills I got from AKU and now am looking at the governance and leadership as the next step.

LYN-3: I am conducting training sessions on Mondays and Tuesdays at Nakasero hospital about nursing care plan and nursing process for the whole of this month. This is due to the training I got at AKU. During our years of diploma education, most of us were not taught the nursing care plan in depth and we were not using it in the hospital care, so recently our chief nursing officer and I introduced it and ordered every department to start using it, there was chaos and resistance especially in maternity because most of them were not accustomed to it, they refused to use that part in their documentation but we insisted and they use it now, those that ask I created time and took them through. So my supervisors asked me to conduct the training because it was obvious to them that I had current knowledge about it.

EON-5: I like it so much when I mentor junior midwives into evidence-based midwifery. I can say all I am teaching them now was acquired from AKU and where I find a problem I consult the one and only Hellen. I just like the way she mentors me into a wonderful mentor, teacher and midwife. I can now set midwifery exams, prepare for OSCE (objective structured clinical examination) and I can now even assess someone's understanding of midwifery.

However, the midwives also mentioned a number of challenges that they faced, particularly in relation to resistance to change that they wanted to introduce into clinical practice and lack of resources.

EOF-1: Another challenge is introducing an evidence-based practice but when off station other midwives take it that you are proud as degree holder so they work against the idea. To overcome this, I have tried to teach on the job, encouraged many to go for studies so that one day we will talk the same language. The practices I introduced are; early initiation of KMC (kangaroo mother care) for the low birth weight babies, cord care using Umbigel, immediate skin to skin after birth, phototherapy for jaundiced babies and effective communication to mothers while giving care.

EON-4: Many are resistant to change, they always want to rebel back. What I have tried to do is perform to the best of my ability so that they can see from me as a living example.

EON-5: The main challenge is the failure for the hospital to have all that is needed in our care for the clients if we are to give quality care. For example if a mother came with a high blood pressure, it is not possible for her to check urine protein because the strips are not in the hospital, so we have to advise them to part with 5,000US\$ and pay to the private wing so that their urine can be examined for protein. If she has no money then the care becomes sub-standard.

Interestingly, the midwives shared their own stress-reduction techniques and literature on stress management via WhatsApp and supported each other through the challenges that they faced.

EON-4: Stress at one point nearly destroyed my life, but after reflecting and finding my voice I counselled myself never to be weakened by weak people. There is a very good book by RH Covey, 'The 8 Habits of highly effective people'. You will be inspired. Have faith in the Almighty Father, there is a saying 'experience is the best teacher'. If you can't face challenges you cannot manage life. This means I really need to be emotionally intelligent. Always accept criticism.

EON-1: I handle stress by being positive that it will soon end, opening up to a trusted friend indeed, timely accomplishment of duties, sharing with people who have gone through the same, praying over the situation and thinking that many have faced this and managed and hence I can. For anxiety I need to have self-confidence, be up to date most of the time, consult. For me, a challenge is a step to a better landing.

Finally, the midwives had reflected on what it meant to them to undertake a BScM at AKU.

EOF-2: I also feel blessed to be part of AKU family because they helped me fulfil my dream of attaining a bachelors' degree in midwifery. At first the public lacked confidence in the programme but later on they are appreciating, even in the new structure of the public service we are included and my colleagues still at diploma level are consulting me of how we managed to get the bachelors.

EON-5: Am blessed to be part of the Aga Khan alumni in the midwifery class. I enjoyed my stay in AKU now am able to provide holistic, evidence based and quality care to my clients and we achieve normality throughout their pregnancies and the outcome being positive. As time goes on I'm beginning to realise that our midwifery trainers mentored us into being responsible midwives and even after school they are still holding our hands through support to do research to a greater level.

EON-2: I am proud to be part of AKU. Many of my workmates wanted to join AKU but they didn't meet the entry criteria. This is because of what the products of AKU do better than they do. The doctors always encourage them to emulate us in the way we work—independent and evidence-based practice. We get both positive and negative comments from colleagues; there are those who say we are proud and over confident and those who say that we over give care to patients but this is good because it makes us exceptional midwives since we are giving evidence-based care.

Summary of findings

To summarise, a broad range of positive changes were reported by the graduate midwives across all domains, which were supported by data from the WhatsApp group. The dominant story of change was that of improved professional practice driven by gaining skills and knowledge after undertaking the BScM at AKU. This cut across domains and presented a positive picture of the professional lives of the graduate midwives. Far fewer negative changes were mentioned by respondents, with the main issue being the resentment and jealousy they faced from colleagues who had not earned a degree and felt threatened by their qualification. However, despite this, the midwives showed resilience and determination moving forwards and a deeper commitment to their profession and the patients under their care.



**The First Hour After Birth:
A Baby's 9 Instinctive Stages**

1 The Birth Cry

2 Reflexes

3 Rooting

4 Sucking

5 Eye Contact

6 Cuddling

7 Eye Orientation

8 Startle Reflex

9 Startle Reflex

9 Stages



LIMITATIONS AND LESSONS LEARNED



Using a non-blinded approach was both a strength and limitation of this study. Midwives openly shared many stories about changes in their personal and professional lives, which might not have been shared if they were not aware of the true nature and purpose of the study. However, there is a risk that some of this information might have been biased as respondents were aware of the study aims and commissioner. Despite measures taken by the research team to mitigate potential bias, participating midwives referred continuously and explicitly to the commissioner throughout their interviews. Their knowledge of the commissioner might have also limited the disclosure of more constructive feedback to inform future programmes. Some midwives were still closely involved with AKU (one midwife was conducting lectures for this year's cohort), and this might have potentially further biased responses.

To enhance the collection of a range of stories of change and reduce pro-project bias in future phases of the study or other similar studies, several lessons have been learned:

- Ensure wording in all communications to the study sample emphasises the exploratory nature of a QuIP—exploring a broad range of activities (and not just those related to the commissioner's intervention) and their drivers of change
- Use data collection tools designed to be non-project specific, with more exploratory and open-ended questions to encourage sharing of experiences not related to the intervention being explored; and
- Consider a recall period that will encompass exposure to a range of different activities and drivers of change or that covers a period beyond the scope of the intervention in question (to allow for a comparison of before and after the intervention, as opposed to during and after the intervention).

Phase 2 of this study comprises interviews with the wider community in which the midwives work, the midwives themselves (covering an additional 6 months after transitioning back to full time practice post-graduation) and selected members of the midwives' families. Lessons learned from the first phase of this study that could be applied to the next phase, include:

- The communities are likely to have experienced a broad range of changes in QoL, especially health status and behaviours. Consider blinding the interviews with community members. This could include blinding the respondents (communications about the study aims could focus on the changes in health and health-seeking behaviours of the community and sample largely women of reproductive age). As the researchers used in the first phase were not blinded, new researchers would have to be recruited and trained for this component
- Family members may also have experienced a range of changes in their QoL, in particular relating to the household economy, livelihood, daily routines and social life (reputation/status). However, family members may already know about the study, and therefore blinding may be more difficult than for community members. If interviews are not blinded, communications with family members, including consent forms, must emphasise the exploratory nature of the study and reduce association with the commissioner
- There is a risk that midwives interviewed in the first phase will inform community members about any future study. To mitigate this, midwives could be briefed on the importance of maintaining blinding in the study, asked to sign a 'non-disclosure' statement (if required), and/or not be informed of exactly when and with whom subsequent data collection will take place.

DISCUSSION AND CONCLUSION



This final section of the report provides a discussion of the main findings in relation to the evaluation questions before drawing some general conclusions.

This QuIP study sought to provide independent evidence of the impact of AKU BScM work/study programme on the lives and wellbeing of 14 of the first cohort of graduate midwives. Gathering stories of change through interviews and a WhatsApp group and identifying the key drivers of change allowed us to explore the main positive and negative changes that had occurred in the lives of the respondents over a 2-year period, and whether or not these changes were attributable to AKU BScM. The QuIP study sought to answer the following questions driving the evaluation.

1. Have there been any changes in the midwives' roles and responsibilities, skills, confidence in their role, profession and personal relationships, wellbeing and career prospects and aspirations for the future over the last 2 years?
2. Are these changes for the better or worse?
3. Are these changes in any way linked to having completed the BScM programme, or incidental to it?
4. What are the drivers behind the changes cited by respondents?
5. What are the relationships between the drivers of change, outcomes and the BScM programme?

The findings from this study showed that undertaking a BScM at AKU in Uganda had an overwhelmingly positive effect on the lives and wellbeing of the 14 graduate midwives interviewed. The most significant story of change running through the data set and across all domains was how undertaking the BScM had increased the midwives' skills and knowledge, leading to an overall improvement in the way that they undertook their professional practice. This consisted of a variety of interwoven strands demonstrating the range of skills and knowledge the midwives had gained and how they had applied these in their lives. The midwives reported an improved ability to undertake their work roles based on implementing evidence-based practice. The increase in their personal and clinical practice confidence meant that they were more assertive in clinical decision-making and voicing their opinions within clinical settings. The midwives reported no longer waiting to be told what to do by doctors, but instead taking the initiative and treating patients as they had been taught. They explained that they had been trained and supervised during their degree to undertake clinical procedures and now understood the reasons behind them, so could apply this new knowledge in their jobs. Colleagues had noticed their improved skills, knowledge and confidence and levied greater respect towards the graduate midwives, demonstrated by an increase in the amount of advice and consultation the midwives were asked to provide, and resulting in overall improved professional relationships at work. The graduate midwives also reported having improved communication skills, which meant that they were practicing patient-centred care and now spent time explaining treatment plans to their patients and listening to their concerns. This resulted in better patient-staff relationships and an overall improvement in patient care. A further change in the midwives was greater self-awareness and critical thinking skills that had positive effects both at work and home. They now reflected on their actions and demonstrated a deeper commitment to midwifery, reading about procedures and keeping up to date with medical knowledge to provide the best care to their patients. The graduate midwives also reported being better able to handle stress and deal with traumatic and challenging situations. In addition, completing their degree had improved relationships with their families as they were respected for their achievement, which acted as an inspiration and motivation for other family members, friends, peers and colleagues to concentrate on achieving their own goals. Finally, the midwives reported an increase in the career opportunities available to them, as well as a strong determination to progress within midwifery, with many aspiring to undertake post-graduate qualifications.

Taking this story of change as a whole, it is clear that the increased level of confidence reported by the midwives resulted from the increased levels of skills and knowledge they had developed while training at AKU had a significant positive impact on the way that they conducted themselves professionally and personally. Midwives reported being more involved in decision-making both at work and home and having greater clarity of thought because of increased critical thinking skills, which enabled them to better plan for the future while maintaining an improved work-life balance.

A secondary significant story of change was the community of practice that this cohort of graduate midwives had developed with each other. Using their own WhatsApp group as a means of communication, the midwives stayed in regular contact, supporting each other professionally and personally, seeking and offering advice on clinical matters, talking about challenging situations, discussing stress-reduction techniques and sharing job opportunities. One midwife went so far as to liken the relationship with her graduate midwife friends as finding another family. This friendship network was highly valued by all participating midwives and provided an essential means of professional and personal support. The midwives were able to talk about concerns that they were having with others who understood their experiences because they were in a similar situation. Given the lack of membership of professional midwifery associations, either because they were not available or because internal politics discouraged the midwives from joining, the importance of this network should not be underestimated. While the midwives spoke positively about the continuing support of staff at AKU and how they could call on them

to assist with difficult clinical situations, the graduate midwife network provided a different kind of support. Having a group of supportive peers is an invaluable resource, and one that was particularly important for the midwives when facing challenges in their daily lives.

Although most of the changes reported by the midwives were positive, there were also some stories of negative change. The first was increased levels of resentment and jealousy that the midwives experienced from less well-qualified colleagues. In some cases, this resulted in deterioration of professional relationships. Graduate midwives reported being unable to delegate work and therefore having an increased burden of work. As one midwife noted, 'change is slow to come', and there was considerable resentment from diploma midwives who did not want to follow the changes in clinical practice being implemented by the graduate midwives. Despite this, the graduate midwives showed a high level of professional and emotional maturity by continuing to perform their jobs to the best of their ability; in effect, leading by example. Increased levels of self-confidence enabled the graduate midwives to push forwards regardless of the resistance they met, and in many cases, they were able to win over their colleagues resulting in improved clinical practice and patient care in the workplace.

A second negative story of change reported by several graduate midwives was that they were still in debt to AKU as they had not finished paying off their tuition fees. This meant that some midwives had seen no increase in their overall income despite gaining a better job, or were being forced to hold down two jobs simultaneously (and in one case, three jobs) to make ends meet. In addition, two midwives reported that they had not yet received their transcripts/certificates, which meant that they had been unable to apply for new jobs.

A few other stories of negative change indirectly attributed to AKU were mentioned by individual midwives, which are important to cite here as they could be used to inform the degree programme moving forwards. These included insufficient knowledge of specialisms such as pharmacology and a lack of experience with neonatal babies. One midwife reported lacking scientific/academic writing skills, which meant she found it difficult to have abstracts accepted for conferences. Another midwife, when asked if she had any comments at the end of the interview, asked if it would be possible to offer a module on research skills. Finally, one respondent lamented the fact that she did not have a platform on which to promote the benefits of attending AKU to diploma level midwives, as this was something that she would very much like to undertake. Overall it can be concluded that this QuIP study found independent evidence to support the ToC relating to AKU BScM work/study programme. The findings suggested that the midwives significantly developed their skills and knowledge and now have a comprehensive foundation of knowledge from preconception to postpartum. There was clear evidence that the midwives had improved clinical competencies, as supported by the discussion of the main story of positive change above and throughout the report. Moving on to the QoL outcomes, there was some evidence to suggest that completing the programme improved QoL through better career prospects, but this was not yet the case for all 14 midwives. Some midwives had obtained new jobs that had more responsibility and in some cases (but not all), were better paid. There was a definite increase in the number and variety of opportunities available to the graduate midwives, but perhaps insufficient time had passed to fully confirm that improved QoL was achieved as a result of completing the degree.

Evidence from this QuIP study supports the assertion that the BScM had increased the confidence of graduate midwives in terms of their professional skills and capacities. However, there was less support for the outcomes of midwives experiencing expanded interpersonal and life experience opportunities. In addition, it was not possible to fully confirm that being a graduate had improved the midwives' status in the community, although the indications were positive with several midwives reporting an increase in training of women in the community (both formally and informally), which had been well received. It is hoped that the second phase of this QuIP study will focus on community level outcomes, enabling this to be revisited at a later date. With regards to professional outcomes, insufficient time has passed between graduation and returning to clinical practice for these to be fully vindicated, but the findings from this study indicate definite movement towards achieving these objectives. In conclusion, this QuIP study provides clear evidence that AKU BScM positively affected the lives and wellbeing of the 14 graduate midwives interviewed. Undertaking the degree led to significant improvement in the personal development of graduates as well as their professional practice.

MAKING SENSE OF THE FINDINGS: POST-STUDY PARTICIPATORY WORKSHOP



A participatory sense-making workshop was held on Tuesday 10th July 2018 in Uganda with key AKU staff from the BScM, Professor Grace Edwards and Hellen Kyakuwaire (senior instructor), along with the QuIP field team Moses Mukuru (lead field researcher), Christine Nalwadda, and Stella Mutiti. Professor Sharon Brownie (AKU), Marc Theuss (AKDN), Fiona Remnant (BSDR) and Gabby Davies (BSDR) joined the workshop via Zoom. The workshop aimed to discuss the findings from the QuIP study presented in this report to draw out the implications for AKU moving forwards with the BScM. This was a positive undertaking and resulted in some suggested ways of addressing the issues raised by the respondents, which could ultimately benefit future cohorts of AKU degree-level midwives.

The workshop began with a series of presentations that included a brief overview of QuIP, an overview of the main findings and reflections from the field team on the QuIP process. This part of the workshop finished with a question-and-answer session and brief discussion that covered:

- Initial impressions of findings from workshop participants: positive and useful
- Usefulness of WhatsApp data: overall worked well and was useful for clarification and reinforcing interview findings¹³
- Could be useful to align findings with net promoter satisfaction scores
- Dissemination of findings: Marc Theuss agreed that AKDN would allocate resources from QoL to aid dissemination
- Considering publication (who, what, when and where?): Joanne Trotter (Aga Khan Foundation Global Lead, Results and Learning) will invite Professors Grace Edwards and Sharon Brownie to present to the QoL team who will contribute to writing and publishing
- Obtaining an ISBN number for report to encourage online dissemination
- Debt from tuition fees: how can this be solved?
- New BScM programme will be starting in Kenya in August 2018.

The remainder of the workshop consisted of the Ugandan-based AKU staff and QuIP field team considering the main positive and negative findings by domain and the implications for AKU in Uganda, and discussing the plan for moving forwards. These are summarised in Table 8.



¹³The field team noted that providing cellular data is a must for the WhatsApp approach, as Uganda recently added a tax levy on all social media that needs to be considered when planning phase two of this research.

Table 8: Implications of findings for AKU Uganda BScM by domain

Domain	Implications of findings for AKU BScM programme
Skills	<ul style="list-style-type: none"> • Teach best practice, but acknowledge resource issues. • Continue with leadership development, conflict resolution, assertiveness.
Work role	<ul style="list-style-type: none"> • Teach resilience and trail blazing. • Reinforce ToC and effects on the students.
Professional relationships	Not listed
Confidence in role	Not listed
Personal relationships	<ul style="list-style-type: none"> • Peer support: there is a need to draw lessons from this cohort for other groups undertaking the same programme because there is evidence of a positive change in personal relationships. • Positive changes seen in families: create a programme for the significant relations to inform them of the nature of the programme so that more support is given to the students while in the programme, its intensity. • Feeling isolated: could be handled within the course of leadership and management/communication skills. • Workload, responsibility and stress in job: target employers as this is a system problem; continuing professional development course for graduates' peers.
Wellbeing	<ul style="list-style-type: none"> • Develop a course that trains midwives on handling stress, as it is one way the midwives turned stress and coping into a positive domain of wellbeing. The skills the faculty used to help students could be applied in a formalised way through a class/workshop to equip students with necessary skills. The graduates testified that the skills worked for them. • A course that increased critical thinking would be a good addition to the programme, such as nursing process and entrepreneurship. • Leadership and management course or unit – this would target empowering midwives to manage human resources, material resources, financial resources and work-life balance. • Involve employers in marketing the programme so that there is an indirect lobby for scholarships for the midwives who wish to join the programme. • AKU could consider other avenues for scholarships for midwives so that on graduation they are able to target jobs for graduate midwives.
Future aspirations	Not listed

Workshop participants devised a list of suggested outputs from the study that could include, but are not limited to:

- A briefing paper
- Methodology paper (International Journal of Qualitative Methods)
- Evaluation of BScM experience
- Incorporate the findings of the study into the curriculum review
- Conference presentations at local, national and international levels.

Moving on from this, workshop participants talked about next steps, including a discussion of the pros and cons of using the same cohort of students or a different group of graduates in the next phase of the QuIP study. Staying with the same cohort would enable interviews with families and blinded interviews with communities of the graduate midwives, as well as potentially another set of interviews with work colleagues and supervisors (partially-blinded). The results from these two distinct groups could be compared and the findings triangulated. Using an alternative cohort of midwives who were not necessarily AKU alumni was also cited as a potentially interesting avenue to follow, although this would depend on funding. This would allow comparison of graduate midwives from AKU and other universities, such as Lira.

The workshop concluded with a discussion of the future research schedule and development of an action plan moving forward, which is set out in Table 9.

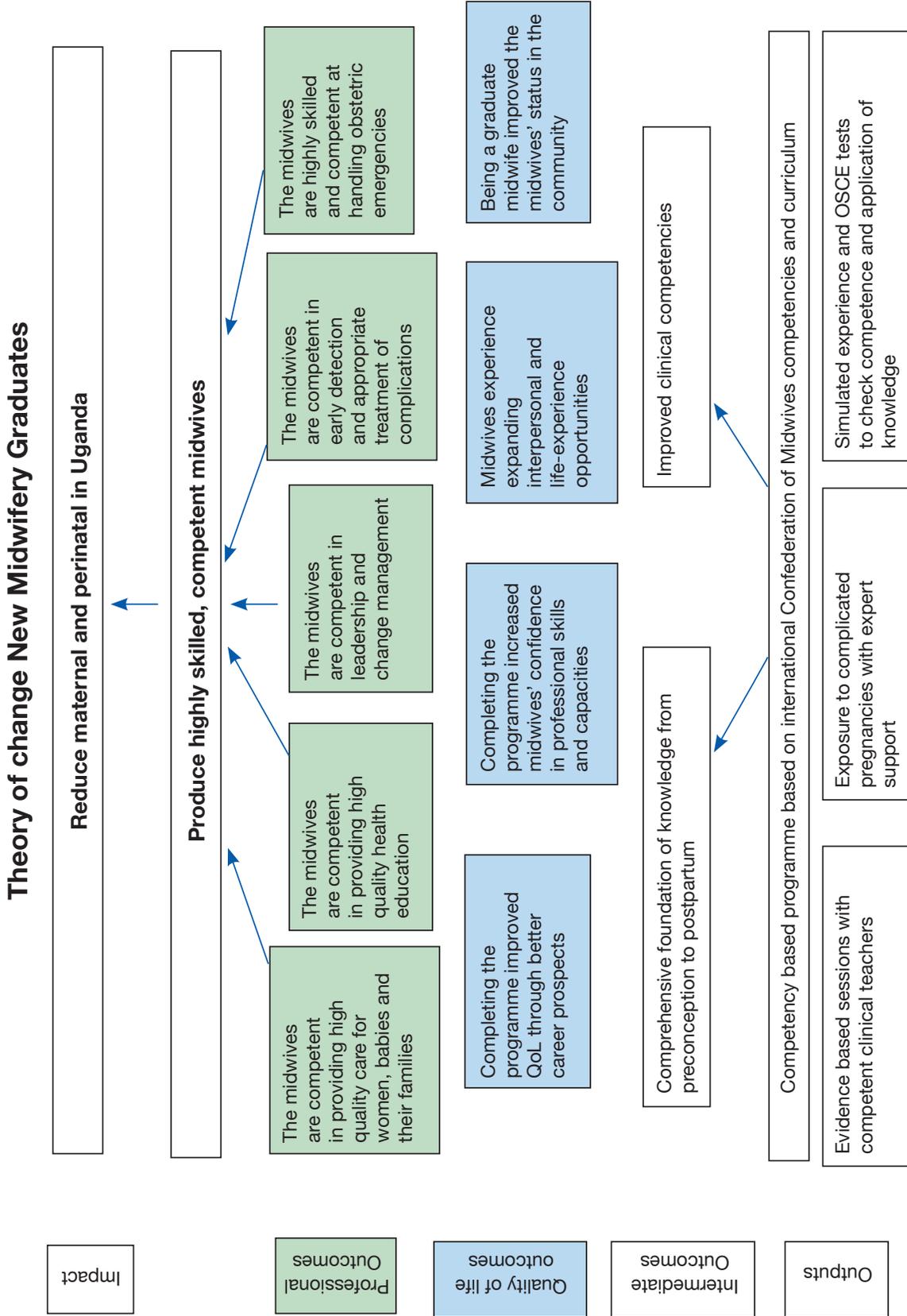
Table 9: AKU research action plan

Phase	Description	Aim	Timing	Status
1	QuIP study	Impact of BScM on wellbeing and lives of graduates		Complete
2	QuIP study	Impact of BScM on wellbeing and lives of peers, clients and families		
3	QuIP study/stakeholder forum	Impact of BScM from perspectives of employers and key stakeholders including: <ul style="list-style-type: none"> • The Nursing and Midwifery Council (NMC) and Uganda Private Midwives Association (UPMA) • Other universities • Midwifery faculty • Medics • National Council for Higher Education • External examiners • Part-time faculty • Alumni 		
4	Curriculum expert review using findings	Curriculum expert review to include: <ul style="list-style-type: none"> • Benchmarks • Other countries • New developments • Local and global drivers • Sustainable Development Goals • National Council for Higher Education • Alumni • National Curriculum development Centre - need to engage initially • Key informant interviews 		



APPENDICES

Appendix 1: Theory of Change



Appendix 2: Questionnaire

A. First section: respondent profile data, including:

		Answer options
A1	Respondent code	
A2	Name of interviewer	
A3	Date of interview	
A4	Start time of interview (hh:mm)	
A5	End time of interview (hh:mm)	
A6	Are you willing to be interviewed?	Yes/No
A7	IF NO: record here any reasons given for not wanting to proceed or any observations for this	
A8	IF YES: we would like to hear your personal answers to our questions. Are you willing to be interviewed alone?	Yes/No
A9	IF NO: write down who else is present and how they are related to the named interviewee	
A10	To make sure our record of the interview is accurate we would like to make an audio-recording of the interview. Are you (both) happy for us to make this recording?	Yes/no
A11	Marital status	Never married/Married/Separated/Divorced/Widowed
A12	Place of work before enrolling for the degree programme	Private/Public
A13	Current place of work	Private/Public
A14	Was your course self-sponsored or sponsored	Self-funded/Sponsored/Partially sponsored
A15	Was your initial training school faith-based or a public university	Faith based/Public University/Private For-Profit Institution
A16	Distance travelled to attend the midwifery programme	
A17	Years in practice before joining the programme	

A18. Most of our questions refer to what has happened in the last 2 years. Can you think back to something important that happened to you 2 years ago? What was it? Please answer the questions below by thinking back to that time.

B. Work roles

B1. In the last 2 years, how has your day-to-day work changed?

- *In the last 2 years, have you taken on any different or additional responsibilities within your workplace and community? Please explain.*
- *Have there been any new opportunities for professional development? Please explain*
- *Why did these changes happen?*

B2. In the last 2 years, has your role in the workplace improved/stayed the same/got worse/not sure?

B3. What is the main reason for any changes?

C. Skills

C1. In the last 2 years, do you feel there have been any significant changes in your ability to successfully perform your duties in your role?

- *In your view, have your clinical skills changed in any way?*
- *Do you think your interpersonal skills in the workplace have changed?*
- *Do you think the quality of care you provide to patients has changed?*
- *What do you attribute these changes to?*
- *Have you received any feedback from patients and colleagues about the quality of care you have provided for patients?*

C2. In the last 2 years, do you think your professional ability/skills are better/the same/worse/not sure?

C3. What is the main reason for any changes?

D. Confidence in the role

If the midwife's key responsibilities in the workplace have changed over the last 2 years (in the same role or in a new role in the workplace) please follow the questions below under section 3. If the midwife's key responsibilities have not changed, please go to question 4 below.

D1. Has anything changed in terms of your confidence to undertake your day-to-day work compared with 2 years ago? Please explain.

- *Why did these changes happen?*
- *Please can you share some examples of experiences or areas of work that have made you feel more confident in the last 2 years.*
- *Please can you share some examples of experiences or areas of work that have made you feel less confident in the last 2 years.*

D2. In the last 2 years, has your confidence in undertaking your day-to-day work: increased/stayed the same/got worse/not sure?

D3. What is the main reason for any changes?

If the midwife's key responsibilities have not changed:

D4. Has anything changed in terms of your confidence to undertake your day-to-day work compared with 2 years ago?

- *Why did these changes happen?*
- *Please can you share some examples of experiences or areas of work that have made you feel more confident in the last 2 years.*
- *Please can you share some examples of experiences or areas of work that have made you feel less confident in the last 2 years.*

D5. In the last 2 years, has your confidence to undertake your day-to-day roles at your place of work: increased/stayed the same/got worse/not sure?

D6. What is the main reason for any changes?

E. Professional relationships

E1. Please tell me how your relationships with work colleagues have changed during the last 2 years, if at all.

- *Have there been any changes in the way people work together?*
- *Has the way you are able to work with/get the best out of your team changed?*
- *Has your level of confidence changed about expressing your opinion in the workplace?*
- *Has your involvement in decision making changed? Has there been a change in the way people seek your opinion?*
- *What are the reasons for these changes?*
- *Has your relationship with other members of your profession (in professional associations) changed?*
- *What are the reasons for these changes?*

E2. In the last 2 years, do you feel that your professional relationships are better/the same/worse/not sure?

E3. What is the main reason for any changes?

F. Personal relationships

F1. Please tell me how your relationships with friends and peers have changed during the last 2 years, if at all.

- *Are there any changes in the way your friends or peers provide support to you?*
- *Are there any changes in the way you support your friends and peers?*
- *How have these changes affected you? And your friends and peers?*
- *What are the reasons for these changes?*

F2. In the last 2 years, do you feel that relationships with your friends and peers are better/the same/worse/not sure?

F3. What is the main reason for any changes?

F4. Please tell me how your relationships with your family have changed during the last 2 years, if at all.

- *Are there any changes in the way your family provide support to you?*
- *Are there any changes in the way you support your family?*
- *How have these changes affected you? And your family members?*
- *What are the reasons for these changes?*

F5. In the last 2 years, do you feel that relationships with family members are better/the same/worse/not sure?

F6. What is the main reason for any changes?

G. Wellbeing

G1. Have there been any changes in your living conditions over the last 2 years?

- *Have there been changes in where you live or the conditions in which you live?*
- *Is there anything you are spending more/less on now?*
- *Has your involvement in household spending decisions changed?*
- *What are the reasons for these changes?*

G2. Has anything changed in the last 2 years in relation to your work-life balance?

- *Has your workload in the workplace changed over the last 2 years?*
- *Has the amount of time you spend at home changed?*
- *What are the reasons for these changes?*

G3. Please tell me how your anxiety and stress levels have changed over the last 2 years, if at all.

- *How have these changes in anxiety or stress manifested themselves?*
- *Have you experienced any changes in your sleep patterns?*
- *What are the reasons for these changes in levels of anxiety or stress?*
- *Do you think your coping mechanisms for dealing with anxiety or stress have changed?*
- *What are the reasons for these changes in coping mechanisms?*

G4. Please tell me how your mechanisms for dealing with traumatic experiences in the workplace (for example, adverse clinical outcomes such as maternal or neonatal deaths, difficult cases) in the workplace have changed over the last 2 years, if at all.

- *Has your exposure to traumatic situations/adverse clinical outcomes changed over the last 2 years?*
- *Do you think your coping mechanisms for dealing with traumatic situations have changed?*
- *What are the reasons for the changes in the way you deal with traumatic situations?*

G5. Overall, taking all things into account, do you think your well-being has improved/stayed the same/got worse/not sure?

G6. What is the main reason for any changes?

H. Career prospects and aspirations for the future

H1. Looking back over the last 2 years, do you feel that your career opportunities have changed? (If the midwife has changed job or her responsibilities have changed over the last two years, please enter that here again)

- *How have these career prospects changed?*
- *Have there been any opportunities for advancing your career?*
- *What are the reasons for this change?*

H2. Looking ahead, do you feel differently about your future career opportunities than you did a year ago?

- *Has your level of confidence in your future career opportunities changed?*
- *What are the reasons for this change?*

H3. Overall, do you think your career opportunities are better/the same/worse/not sure?

H4. What is the main reason for any changes?

H5. Don't forget to thank the interviewee for their participation and invite them to ask you any questions they have. Note down what these are, and if they prompt issues relevant to the research that you would like to share.





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