

The role of on-campus childcare centre in improving student mothers' learning outcome: A case study of Dambai College of Education, Oti Region, Ghana

Benedicta Awusi Atiku¹, Eric Kwame Austro Gozah², John Erebakyere^{3*}, Sylvia Richlove Nortey⁴, Lawrencia Afua Tilibe⁵ & Mercy Ekua Mensah⁶

1. Dambai College of Education, Oti Region, Ghana
Email: atikubenedicta@yahoo.com
2. Dambai College of Education, Department of Mathematics and Computer Studies, Ghana
Email: austro1979@yahoo.com
3. Dambai College of Education, Department of Mathematics and Computer Studies, Ghana
*Email: erebakyere@gmail.com
4. Dambai College of Education, Department of Education Studies, Ghana
Email: snortey@dace.edu.gh
5. Dambai College of Education, Department of Education Studies, Ghana
Email: ltilibe@dace.edu.gh
6. Dambai College of Education, Department of Creative Arts, Ghana
Email: mmensah@dace.edu.gh

Received: August 15, 2024

Revised: February 8, 2025

Accepted: June 10, 2025

To cite this article: Atiku, B. A., Gozah, E. K. A., Erebakyere, J., Nortey, S. R., Tilibe, L. A., & Mensah, M. A. (2025). The role of on-campus childcare centre in improving student mothers' learning outcome: A case study of Dambai College of Education, Oti Region, Ghana. *Journal of Transformative Education and Development*, 1(1), 33 – 50.

Abstract

This study explored the positive impact of Dambai College of Education nursery on student- nursing-mothers' educational attainment by focusing on academic achievement, maternal nutritional health, spousal relationship, and child health. Using qualitative approach, structured interviews were conducted on nine student-nursing-mothers sampled through purposive and census sampling.

The nursery school boosted academic performance through regular attendance, active engagement, and supported teaching, improving GPAs and program completion. It enhanced maternal health, strengthened parental relationships, and fostered children's physical and social development, demonstrating holistic benefits for families. The study concluded that such support systems as institution-based nursery should be implemented in all higher education institutions to promote inclusive and accessible education to all to fulfil SDG 4. Research the nursery's impact on staff career fulfilment and graduates' long-term careers. Investigate strategies to replicate nurseries in Ghana's Colleges of Education lacking such facilities.

Keywords: *Student-Nursing-Mothers, Nursery School, Educational Attainment, On-campus Childcare, College of Education*

Introduction

In Ghana, higher education institutions including certificate, diploma, and bachelor's degree-awarding Colleges of Education are structured to admit full-time high school graduates, typically assumed to be unmarried and childless. Consequently, these institutions historically lacked nursery facilities to accommodate students with children. However, societal trends in the 21st century reveal a growing prevalence of early adulthood marriages and parenting among high school graduates, driven by factors such as socioeconomic disparities (e.g., poverty among young women and financial influence of male partners), improved nutrition, and cultural pressures. Prior to recent reforms, female students who became pregnant or married during their training faced mandatory dismissal under teacher education codes, resulting in high dropout rates. Student Nursing Mothers (SNMs) continue to face systemic barriers, including rigid class schedules, inadequate institutional support, and financial strain from childcare costs, which collectively undermine academic performance and engagement (Amos *et al.*, 2021; Osafo, 2017; Ashipala & Natanael, 2022).

The integration of Ghana's Colleges of Education is also hinged on the SDG 4 of inclusive and equitable education and has led to policy reforms. Conversions from diploma- to degree-awarding institutions now need to be flexible enough so as to make provision for pregnant students and SNMs. The Dambai College of Education, for example, opened a nursery within the college to resolve the childcare problems. The study differentiates between the two groups of the traditional student (no constant childcare demands) and the student nursing mother (SNM) to determine how the nursery affects academic

achievement.

On-campus nurseries are crucial for the success of student-parents globally. Access to low-cost childcare near the PSIs correlates with higher completion rates due to the fact that it allows SNMs to balance parenting and academics (Reichlin Cruse *et al.*, 2018; Gault *et al.*, 2019).

Psychological safety of near childcare facilities also enhances the concentration and decreases the stress (Navarro-Cruz, 2020; Nagaddya Mallawa Arachchi, 2023). Yet, these facilities are a rare resource in Ghanaian higher education and serve to reinforce inequities and subvert the demand of SDG 4 for universal access.

Recognising this gap, Dambai College of Education established a nursery school to support both staff and student nursing mothers who require childcare services. Given the significance of this intervention, the college sought to evaluate the impact of the nursery on the academic performance of student nursing mothers, prompting this scientific inquiry. Thus, this study examines the impact of the on-campus nursery and related support interventions on the academic outcomes of student nursing mothers at Dambai College of Education.

Research questions

1. What was the impact of the college nursery on the student-nursing-mothers' educational performance on their educational attainment at the College?
2. What was the impact of the College Nursery on the student-nursing-mothers' maternal nutritional health on their educational attainment at the College?
3. What was the impact of the College Nursery on the student-nursing-mothers' spousal relationship or health on their educational attainment at the College?
4. What was the impact of the College Nursery on the health of the enrolled child on the educational attainment of the student-nursing-mothers at the College?

Theoretical framework

The theoretical foundation of this study is anchored in Role Conflict Theory, which examines how individuals navigate multiple societal roles such as

mother, student, or teacher and the challenges arising from conflicting expectations (Dankyi, Dankyi, & Minadzi, 2019). Rooted in broader Role Theory (Biddle, 1986), this framework posits that human behaviour is shaped by social identities and contexts, with individuals conforming to predictable behavioural patterns aligned with their societal roles. Role conflict occurs when individuals face incompatible demands from simultaneous roles, leading to diminished effectiveness in fulfilling responsibilities (Amos *et al.*, 2021).

Role conflict manifests in two primary forms. First is intra-role conflict, where contradictory demands arise within a single role (e.g., balancing academic deadlines with caregiving as a student-nursing-mother). And second is inter-role conflict, where demands span multiple domains (e.g., reconciling maternal duties with academic obligations) (Amos *et al.*, 2021; Adofo, 2013). The study applies theoretical lens to analyse how institutional childcare support and mitigates inter-role conflict for student-nursing-mothers. The study on Dambai College of Education investigates the interplay between role conflict resolution and educational outcomes, emphasising the role of on-campus nurseries in aligning with SDG 4's goals of inclusive education.

Conceptual framework

The conceptual framework posits that on-campus nursery schools help nursing mothers balance parenting and academic responsibilities by alleviating childcare burdens. This support enables them to fully engage in academic activities while accessing necessary support from lecturers and peers. As illustrated in Figure 1, the availability of on-campus nursery schools may positively influence their learning experiences and outcomes.

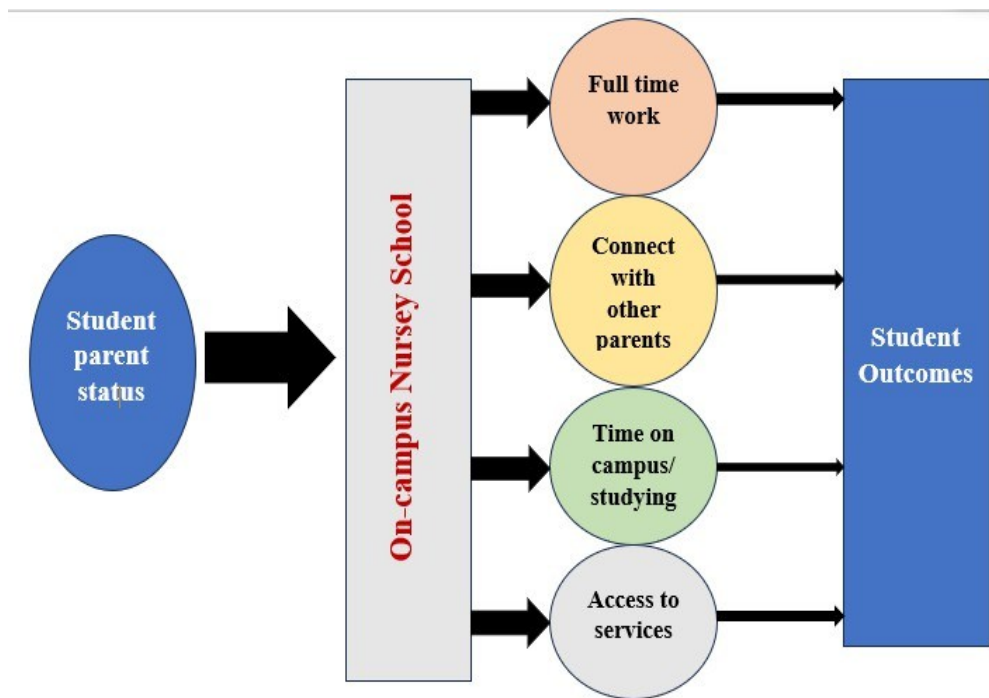


Figure 1: Role-Conflict Model of Student Parents (Adapted from Dillon, 2023)

The role-conflict model (Figure 1) conceptualizes the shared responsibilities of student parents. This model demonstrates that access to on-campus nursery schools' benefits student-parents by: Improving their time management; Fostering peer connections; Increasing available study time; and Enhancing access to academic support. These factors enable student-parents to balance their responsibilities more effectively, ultimately leading to improved learning experiences and better academic outcomes.

Methods

Approach and design

This study used a descriptive phenomenological design to explore the lived experiences of student-mothers. Phenomenology aims to reveal the universal essence of a phenomenon by analysing participants' everyday experiences while suspending researchers' preconceived assumptions (Vanderstoep & Johnston, 2009). Through retrospection and reflection, the study examined student-mothers' perceptions of their dual roles, including their challenges,

coping strategies, and academic impacts (Christensen, Welch, & Barr, 2017). In this approach, researchers serve as mediums for reporting experiences with minimal reinterpretation. The phenomenological design provided a comprehensive understanding of student-mothers' realities within higher education institutions, offering rich insights into their academic and personal struggles.

Sampling methods

The census method used was purposefully for selecting all nine nursing mothers enrolled at Dambai College of Education. Given the small population and shared characteristics among participants, this approach ensured a comprehensive exploration of their experiences. Systematic sampling was used to gather responses, facilitating an in-depth understanding of the phenomenon (Elmusharaf, 2012; Flick, 2010).

Instruments

A structured open-ended interview guideline was designed and used for data collection, enabling participants to freely articulate their experiences in alignment with the study's thematic framework.

Data collection and analysis

The analysis followed Braun and Clarke's (2006) six-step framework, beginning with multiple readings of the transcribed data to ensure familiarity. Initial codes were generated based on recurring ideas and then grouped into broader themes reflecting key insights from participants' responses. Participants' responses were coded (e.g., P1, P2, P3) and categorised into emerging themes. Themes were reviewed and refined to ensure coherence and accuracy. To enhance trustworthiness, reflexivity, triangulation, peer debriefing, member checking, and low reference quoting were employed throughout the process.

Results and Discussions

The study explored the impact of the College Nursery School on student-nursing-mothers educational attainment at Dambai College of Education. A phenomenological design was adopted, with structured interviews used to gather qualitative data from participants. The findings and discussions are interpreted through the lens of role conflict theory, with results organised to align with the study's research objectives.

What was the impact of the college nursery on the student-nursing-mothers' educational performance on their educational attainment at the College?

Academic performance and attendance

Participants universally highlighted the nursery's role in improving academic engagement and outcomes. For instance, P1 reported a steady rise in their CGPA from 3.46 to 3.63, attributing this to uninterrupted class attendance, timely assignment submissions, and focused exam preparation: *"...with the nursery, we attended lectures regularly, completed assignments on time, and passed exams to progress through semesters."*

Similarly, P4 linked their academic improvement directly to childcare support, while P3 noted the nursery resolved chronic absenteeism:

"...the nursery gave us time and energy to focus on coursework, especially attending scheduled classes."

Even participants like P6 and P8, who saw no GPA gains, maintained stable academic performance, underscoring the nursery's role in preventing setbacks.

Mental health and psychological relief

The nursery alleviated **stress and anxiety** associated with childcare, fostering mental bandwidth for academic work. P1 emphasised:

"Peace of mind about my child's safety let me concentrate fully on academics...." P2 and P5 echoed this, linking psychological relief to productivity:

"...knowing our children were professionally cared for reduced anxiety, helping us complete assignments."

This aligns with Navarro-Cruz (2020), who identified childcare as critical for reducing stress and enhancing academic focus.

Time management and structured routines

The nursery's **schedule alignment** (e.g., 6:30 a.m. opening) enabled efficient planning. P6 and P7 highlighted how this structure allowed them to balance classes and parenting. P8, who nearly deferred due to overwhelming assignments, stated: *"The nursery helped manage pressure from teaching portfolios and reports..."*

Such logistical support mitigated role conflict, freeing participants from the

need to rely on siblings (P1's sister resumed her education) or external caregivers.

Role conflict resolution and alignment with literature

The nursery directly addressed competing parental-academic roles, a challenge well-documented in existing literature. Ashipala and Natanael (2022) noted that student-mothers often sacrifice study time for childcare, while Ladi (2020) highlighted rushed or postponed academic tasks. The nursery's structured environment countered these issues, reducing absenteeism (Amos et al., 2021) and fostering engagement. P5 and P7's improved CGPAs (from 2.6 or 2.7 to 2.9 respectively) exemplified this shift, resonating with Esia-Donkoh's (2014) emphasis on institutional support for academic success.

The impact of college nursery's transcended childcare, fostering holistic academic empowerment. In addressing mental health, time constraints, and role conflict, it enabled SNMs to thrive academically while balancing motherhood. Mixed GPA outcomes (e.g., P6 or P8's stability vs. others' gains) which suggest further refinements, such as academic counselling and provision of teaching learning resources will enhance efficacy. Nonetheless, the nursery exemplifies SDG 4's vision of inclusive education, offering a replicable model for Ghanaian higher education.

The introduction of the College nursery at Dambai College of Education significantly transformed the academic trajectories of student nursing mothers (SNMs). Academic performance and attendance emerged as the central theme, which was attributed to their success of reliable childcare. Participant P1 highlighted how the nursery enabled consistent class attendance: "... with the nursery in place, we were regular in lectures, completed assignments on time, and passed exams to move through semesters successfully." Similarly, P3 noted, "The nursery gave us time to focus on coursework, especially attending classes at scheduled times." These improvements were quantifiable: P1's CGPA rose from 3.46 to 3.63, while others (P2, P4, P7, P9) reported GPA increases of 1.6 – 2.0. Even participants like P6 and P8, who saw no GPA gains, maintained stable academic performance as a critical outcome given by their dual responsibilities.

Mental health and psychological relief underpinned these academic gains. Participants universally emphasised the peace of mind derived from

professional childcare. P1 explained, “*I no longer worry about my child's well-being, which lets me concentrate fully on academics.*” P2 echoed this, linking reduced anxiety to academic productivity: “*... the psychological relief helped us complete assignments for professional portfolios.*” This aligns with Navarro-Cruz's (2020) assertion that childcare alleviates stress, fostering academic engagement.

Time management and structured routines further supported SNMs' success. The opening session of the nursery's 6:30 a.m. allowed participants like P6 and P7 to align childcare with class schedules. Respondent P8, who nearly deferred due to overwhelming assignments, stated, “The nursery helped me manage pressure from teaching portfolios and reports...” By resolving logistical challenges, the nursery mitigated role conflict a theme emphasised in literature (Dankyi *et al.*, 2019; Ashipala & Natanael, 2022). For instance, P1's younger sister, previously a caregiver, could resume her own education, illustrating how institutional support extends beyond individual SNMs to broader kinship networks.

Alignment with global evidence reinforces these findings. The nursery's role in reducing absenteeism and academic disruptions mirrors Amos *et al.*'s (2021) observations, while its psychological benefits reflect Navarro-Cruz's (2020) focus on mental security. As Esia-Donkoh (2014) argues, such structured childcare is pivotal for student-parents navigating competing roles.

In conclusion, the impact the nursery school made transcended academics success, fostering holistic well-being and equity. By addressing these systemic barriers time constraints, mental strain, and role conflict exemplifies how institutional support aligns with SDG 4's vision of inclusive education. While challenges like variable GPA outcomes persist, the nursery's success in stabilising academic progress underscores its necessity in Ghanaian higher education.

What was the impact of the College Nursery on the student-nursing-mothers' maternal nutritional health on their educational attainment at the College?

Enhanced nutritional practices

The nursery enabled SNMs to transition from reliance on fast food to **balanced, home-cooked meals**. Participant P1 highlighted:

“... without the nursery, I wouldn't have time to prepare varied, balanced

Atiku et al. The role of on-campus childcare centre on student mothers' learning outcome

meals. Now, I shop and cook in bulk during free periods, ensuring my family's health."

Others, like P8, contrasted past struggles skipping meals or eating instant noodles with current habits:

"...now, I prioritise dietary needs when the nursery is open, cooking healthy meals instead of resorting to 'indomie'."

This shift aligns with Ashipala & Natanael's (2022) findings that childcare access reduces time poverty, enabling healthier dietary choices.

Institutional support and routine structuring

The college's flexible meal schedules (e.g., extended breakfast/lunch windows) and nursery hours provided SNMs with the time autonomy needed to balance nutrition and academics. P9 noted: *"... the new meal schedule lets me collect food at my convenience, avoiding the rush that once left me without meals."*

Participants P2, P5, and P6 emphasised how this structure allowed them to *control meal quality*, avoiding roadside food of uncertain nutritional value.

Holistic well-being and theoretical alignment

Beyond nutrition, the nursery fostered routines integrating physical health. P9 shared:

"... with leisure time from childcare, I attend exercise sessions, improving my energy for studies."

This aligns with Bronfenbrenner's ecological systems theory (Friedman & Allen, 2011), where supportive environments (e.g., nurseries, flexible policies) empower individuals to adopt positive lifestyle changes. SNMs reported:

- Reduced stress from meal planning.
- Increased mental bandwidth for academic tasks.
- Time allocation for shopping, cooking, and exercise.

The nursery's impact transcends childcare, addressing systemic barriers to health equity. By providing time, structure, and autonomy, it enabled SNMs to prioritise nutrition and well-being a critical factor in their academic success. These findings underscore the necessity of **institutional childcare support** in fostering environments where student-parents can thrive holistically, aligning

with SDG 3 (health) and SDG 4 (education) objectives.

What was the impact of the College Nursery on the student-nursing-mothers' spousal relationship or health on their educational attainment at the College?

Institutional flexibility and proximity to spousal support

The College's rare but critical accommodation granting special permission for spouses of SNMs with infants under two years (e.g., P4, P7) to reside in Dambai demonstrates institutional recognition of caregiving challenges. This policy enabled shared parenting responsibilities and reduced logistical strain: *"The nursery support has given my husband and me time to attend lectures and reduce tensions from juggling parenting and academics."* (P4)

For others with spouses outside Dambai, reliance on kinship networks (e.g., siblings) mirrored Ghanaian cultural practices, though lack of spousal proximity intensified caregiving burdens.

Strengthened spousal relationships and communication

The nursery alleviated childcare pressures, fostering emotional resilience and stronger marital bonds. P7 noted:

"We now enjoy peaceful moments together; our bond has grown stronger, deepening our love." Distance-parenting SNMs leveraged technology (e.g., phone, WhatsApp) to maintain communication, building trust and reducing anxieties about infidelity.

Mental health and emotional well-being

All participants unanimously reported reduced stress and improved mental health. P4 emphasised: *"...knowing my child is cared for reduced my stress, letting me approach family life with joy."* This aligns with Amos *et al.*, (2021), who link institutional childcare to enhanced familial bonds and emotional stability.

Role conflict mitigation and academic-family balance

The nursery addressed inter-role conflict (Biddle, 1986), where parenting and academic duties clash. Pre-nursery challenges included:

- Exhausting 3:40 a.m. routines to juggle chores and breastfeeding.
- Mental instability from balancing infants and lectures. post-nursery, SNMs like P8 highlighted:

Atiku et al. The role of on-campus childcare centre on student mothers' learning outcome

“Reliable childcare let me focus on studies and well-being, improving my quality of life.”

Cultural and policy implications

The nursery's success underscores the need for scalable institutional policies in Ghanaian higher education. By supporting SNMs regardless of spousal proximity, the College aligns with SDG 4 (inclusive education) and SDG 5 (gender equality), offering a model for addressing systemic inequities.

The nursery's impact transcends childcare, reshaping spousal dynamics, mental health, and academic outcomes. By reducing role conflict and fostering trust, it exemplifies how targeted institutional support can transform student-parent experiences, advocating for broader adoption across educational systems.

What was the impact of the College Nursery on the health of the enrolled child on educational attainment of the student-nursing-mothers at the College?

In response to the impact of the nursery to their children's health, towards their student-nursing- mothers' academic attainment, participants unanimously praised the services, describing them as comprehensive and impressive. They shared that the nursery ensures their babies were well cared for throughout the day.

To all the participants, their children to the nursery were equipped with double sets of clothing, diapers (pampers), and toilet rolls (T-roll), soap, bibs and other baby care stuffs. The attendants diligently change the babies' diapers and clean them with water whenever necessary, ensuring their hygiene is maintained. Dirty clothes are immediately replaced with clean ones, keeping the children comfortable and fresh always / throughout the days.

All participants maintained that the nursery has collaborated with a community health nurse who visits regularly to provide immunisations, making it convenient for parents to stay on top of their children's healthcare. Parents simply include the weighing card in their child's bag, and the necessary vaccinations are administered at the nursery school.

The participants noted variously that the level of care their children receive at the nursery is exceptional, giving them peace of mind and allowing them to focus on their academic and personal responsibilities. One parent remarked,

'The care for our babies has been nothing short of impressive. It's comforting to know that our children are in such capable and attentive hands' (P5).

One participant (P3) noted, *'... honestly, with the support of the nursery, we were able to achieve academic success that we wouldn't have otherwise. Many of us, who were managing both childcare and our studies, graduated with second-class upper honours, and one of us even graduated with first-class honours—something truly remarkable'.*

All the participants confirmed that they have noticed positive changes in their babies' health and social lives since enrolling them in the nursery school. They observed that their babies have become more social, confident, and independent. The children no longer require the constant presence of their mothers and are able to communicate with others more effectively. Additionally, they are more active and engaged, showing greater enthusiasm for interaction and play. The nursery has not only contributed to their health but also to their social development, fostering skills that will serve them well as they continue to grow.

The nursery's impact extends to children's development, fostering improved social, emotional, and physical growth. Student-nursery mothers observed greater confidence, independence, and communication skills in their children. These findings align with Bronfenbrenner's ecological systems theory, which highlights the significance of nurturing environments for child development. The emphasis on nutritious meals and active play-based supports both physical and mental well-being by corroborating Mahaffey *et al.*, (2015), who advocated for inclusive policies to address the unique challenges faced by student-mothers.

Participants experiences shared indicated that the nursery has had a profound impact on their ability to focus on their education. Knowing that their child is in safe hands in a supportive and enriching environment that allowed to engage fully in class activities, work on subject projects, attend Supported Teaching in School, writing of reports, and complete assignments without the constant worry of childcare. This peace of mind has significantly improved their concentration, productivity, and overall academic performance at the College. The participants agree that the nursery's intervention made it possible for them to balance family and academic responsibilities, leading to impressive academic achievements.

Broader implications for inclusivity

The nursery school underscores the importance of institutional support for student-parents who play dual roles. These findings echo Mahaffey et al., (2015), who advocated for inclusive policies to address the unique challenges faced by student-mothers. Similar time period should not be given to student-nursery mothers and non-student-nursery mothers. The Gender Equality and Social Inclusion (GESI) policies as presented by SDG 4 and, adopted by Ministry of Education and Dambai College of Education further illustrate the role of institutions in promoting equity and inclusivity, ensuring that adult learners receive adequate support to succeed.

Conclusion

This study highlights the positive impact of Dambai College of Education nursery on its student- nursing-mothers educational attainment. By addressing childcare needs, it enhanced academic performance, maternal nutritional health, spousal or family relationship, and child development. These findings underscore the importance of institutional support systems in enabling student- parents to balance their dual roles effectively. Future research should explore the impact of the College nursery on the career fulfilment of beneficiary staff; long-term career development of beneficiary student-nursing-mothers (graduates); and investigate strategies for replicating school nursery across other higher educational institutions that do not have such facilities especially the Colleges of Education in Ghana.

Recommendations

The study recommends that: Higher Education Institutions (HEIs) which do not have institutional nursery should consider establishing on-site nursery schools.

HEIs should develop inclusive education policies that provide support system for students-nursing- mothers to achieve their educational aspirations.

Further research should be conducted on impact of the college nursery on career fulfilment of beneficiary staff of the College likewise long-term career development of beneficiary students (student-nursing-mothers who have graduated and, on the job,).

As an additional support, HEIs, especially, Colleges of Education in Ghana who are still practicing the 'traditional dining system' should as a matter of urgency adopt flexible canteen system that support the maternal nutritional health of

student-nursing-mothers. Guidance and Counselling units should also be strengthened to support such family type students.

Ethical Statement

Written consent was obtained from participants prior to the commencement of interviews, ensuring voluntary participation and ethical adherence.

Conflict of Interest

The authors affirm that there is no conflict of interest with regards to the publication of this article.

Authorship Contribution Statement

Atiku: Concept and design, data acquisition, critical revision of manuscript, supervision and final approval. Gozah: Data acquisition, critical revision of manuscript and supervision. Erebakere: Data analysis / interpretation and drafting manuscript. Nortey: Data acquisition. Tilibe: Data acquisition. Mensah: Literature review.

Funding

No funding in the form of a grant was received from any agency or institution in the public, commercial or not-for-profit sectors. Funding was purely sponsored by the authors.

Acknowledgment

The authors would like to appreciate the immense contribution of the student-nursing-mothers who served as participants and provided credible information that have resulted in this paper.

Generative AI Statement

As the authors of this work, we minimally used the AI tool (ChatGPT) for the purpose of summarising. After using this AI tool, we reviewed and verified the final version of our work. We, as the authors take full responsibility for the content of our published work.

References

- Adofo, S. (2013). *Challenges and coping strategies of student nursing mothers in tertiary institutions in the greater Accra region of Ghana* (Master's thesis, University of Ghana). (University of Ghana Digital Collections). <https://tinyurl.com/2fua8t2n>
- Adusah-Karikari, A. (2008). *Experiences of women in higher education: A study of women faculty and administrators in selected public universities in Ghana* (Doctoral dissertation, Ohio University). OhioLINK Electronic Theses and Dissertations Center.
- Amos, P. M., Amoako, B. M., Antwi, T., & Amoah, H. (2021). Motherhood and higher education in Ghana: Experiences of student-nursing mothers. *International Journal of Didactical Studies*, 2(1), 101454. <https://doi.org/10.33902/IJODS.2021167163>
- Anane, C., Adangabe, A. A., & Inkoom, D. (2021). Coping strategies and perceived support of student-mothers at the university of education, Winneba-campus. *South Asian Journal of Social Sciences and Humanities*, 2(3), 151-169. <https://doi.org/10.48165/sajssh.2021.2310>
- Ashipala, D. O., & Natanael, S. (2022). Experiences of nursing students who are mothers in balancing their dual roles in undergraduate nursing and midwifery education: A phenomenological study. *International Journal of Africa Nursing Sciences*, 17, 100447. <https://doi.org/10.1016/j.ijans.2022.100447>
- Biddle, B. J. (1986). Recent developments in role theory. *Annual Review of Sociology*, 12(1), 67–92. <https://doi.org/10.1146/annurev.so.12.080186.000435>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Christensen, M., Welch, A., & Barr, J. (2017). Husserlian descriptive phenomenology: A review of intentionality, reduction and the natural attitude. *Journal of Nursing Education and Practice*, 7(8), 113–118. <https://doi.org/10.5430/jnep.v7n8p113>

Atiku et al. *The role of on-campus childcare centre on student mothers' learning outcome*

- Dankyi, J. K., Dankyi, L. A., & Minadzi, V. M. (2019). Challenges and coping strategies of student mothers at the University of Cape Coast Distance Education, Ghana. *Creative Education*, 10(11), 1456–1472. <https://doi.org/10.4236/ce.2019.1011176>
- Dillon, J. (2023). *Impact of on-campus childcare on student parent success in a community college setting* (Doctoral dissertation, St. John's University). ProQuest Dissertations Publishing.
- Elmusharaf, K. (2012). *Qualitative sampling techniques* [Training course presentation]. Training Course in Sexual and Reproductive Health Research, World Health Organization, Geneva. <https://www.gfmer.ch/SRH-Course-2012/research-methodology/pdf/Qualitative-sampling-techniques-Elmusharaf-2012.pdf> (gfmer.ch)
- Esia-Donkoh, K. (2014). *Child-rearing practices among student-mothers at University of Cape Coast, Ghana. Society, Biology and Human Affairs*, 78(1–2), 25–34. University of Cape Coast Institutional Repository. <http://hdl.handle.net/123456789/7826> (ir.ucc.edu.gh)
- Flick, U. (Ed.). (2013). *The SAGE handbook of qualitative data analysis*. Sage. <https://doi.org/10.4135/9781446282243>
- Friedman, B. D., & Allen, K. N. (2011). *Systems theory. Theory & practice in clinical social work*, 2(3), 3-20. <https://doi.org/10.4135/9781483398266.n1>
- Gault, B., Reichlin Cruse, L., & Schumacher, R. (2019). *Bridging Systems for Family Economic Mobility: Postsecondary and Early Education Partnerships*. Institute for Women's Policy Research.
- Getzels, J. W., & Guba, E. G. (1954). Role, role conflict, and effectiveness: An empirical study. *American Sociological Review*, 19(2), 164-175. <https://doi.org/10.2307/2088398>
- Ladi, U. A. (2020). Assessment of coping strategies of student nursing mothers in tertiary institutions and their academic performance in North-West, Nigeria. *Al-Hikmah Journal of Education*, 7(1), 259-265.
- Mahaffey, B. A., Hungerford, G., & Sill, S. (2015). College student mother needs at regional campuses: An exploratory study. *Aurco Journal*, 21, 105-115.

- Atiku et al. *The role of on-campus childcare centre on student mothers' learning outcome*
- Nagaddya, T., Dey, S. R., & Mallawa Arachchi, T. (2023). *WSU Liverpool City Campus Crèche Evaluation Report: Untold Stories of Student Parents*.
- Navarro-Cruz, G. (2023). It's not rational It's complicated: Latina mothers' choices of childcare. *Journal of Latinos and Education*, 22(2), 486-505. <https://doi.org/10.1080/15348431.2020.1791122>
- Ogunsiji, O., & Wilkes, L. (2005). Managing family life while studying: Single mothers' lived experience of being students in a nursing program. *Contemporary nurse*, 18(1-2), 108-123. <https://doi.org/10.5172/conu.18.1-2.108>
- Osafo, A. B. (2016). *Challenges and coping strategies of student mothers of UCC College of Distance Education: The case of the Cape Coast Centre* (Doctoral dissertation, University of Cape Coast). University of Cape Coast Institutional Repository. <http://hdl.handle.net/123456789/3458>
- Reichlin Cruse, L., Gault, B., Suh, J., & DeMario, M. A. (2018). *Time demands of single mother college students and the role of childcare in their postsecondary success*. Briefing paper, Washington, DC: Institute for Women's Policy Research.
- Uwakwe, R. C., Ofole, M. N., Elom, C. O., Uba, M. B. I., Obih, S. O. A., Ugbogu, C., & Eze, E. N. (2021). Academic Challenges of Student Mothers in Tertiary Education: Implication for Inclusiveness and Counselling. *Turkish Online Journal of Qualitative Inquiry*, 12(9).
- VanderStoep, S., & Johnston, D. (2009). *Methods For Blending Qualitative and Quantitative Approaches*. Pearson.