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Parental Stress, Social Support and Postnatal Depression: A Quantitative Correlational Study Design

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Abstract

This study examines the relationship between parental stress, social support and postnatal depression among teenage mothers at Kasangati Health Centre IV Nangabo, Kyadondo in Wakiso district. The study employed a correlation study design where the chi-square was used to examine the first three study hypotheses and then the Baron and Kenny (1986) regression analysis was used to test the fourth hypothesis. Data was collected from using a systematic random sampling strategy where 103 teenage mothers from Kasangati Health Centre were selected. Results indicate that parental stress is not significantly related to postnatal depression x2 (1, n =103) = 0.137, p=0.711. Additionally, there is an association between parental stress and social support (x2 (1, n =103) = 5.992, p=0.014). Social support and postnatal depression are not significantly correlated x2 (1, n =103) = 0.12, p=0.913. For the fourth hypothesis, social support does not moderate the relationship between parental stress and postnatal depression. The study concludes that teenage mothers who experience less social support are more likely to face postnatal depression than those who experience more social support.

Keywords: *Parental Stress; Social Support; Postnatal Depression; Correlational Study Design*

Introduction

Teenage motherhood is a global phenomenon that ranges from 143 per 1000 worldwide (Gregorio, 2018). Teenage motherhood refers to young mothers between 11 and 17 years who become pregnant and parent their babies (Ngwira et al., 2021). According to Save the Children, 13 million children are born annually to women aged under 20 worldwide, more than 90% are in developing countries (Pueyo, 2022). Many teenage mothers shoulder the burden of motherhood, which comes with its own set of costs and problems because many of them are deemed unfit for motherhood (Amoadu et al., 2022).

In Africa, a drastic increase in the number of teenage mothers since 2020 has been reported. The Department of Statistics of the Republic of South Africa indicated that a total of 34,587 children were born in 2020, by mothers aged 17 or younger, 16,042 were aged 17 while

688 were 11 old. A pertinent example of this is provided by Lesotho and Namibia, where 6 out of 10 and 7 out of 10 girls, aged 15-19, are mothers with their first child, respectively (Molek et al., 2022). In 2019, Global Childhood Statistics revealed that, Kenya was the third with the highest rate of teenage motherhood in the world with 82 births per 1,000 live births. These numbers indicate a considerable increase in teenage motherhood in Kenya (NCDP, 2020).

In Uganda, teenage mothers account for 22.3% of school dropouts among girls aged between 14 to 18 and only 8% of the girls that drop out of school are given a second chance to re-enroll (MoES, 2020). During a December first Ugandan parliamentary seating, Vice President Jessica Alupo reported that since March 2020, statistics had showed increased cases of teenage mothers. She mentioned that a total of 354,736 teenage mothers were registered in 2020, while 295,219 teenage mothers were registered between January to early September 2021. The practice of teenage motherhood affects over 60% of the young girls in Uganda of which 15% are married by age of 15 and 49% by the age of 18. In addition, it remains high (24%), which implies that a number of teenage girls are denied their childhood and their rights to exploit the expanded education opportunities (UNICEF, 2021), which calls for closer attention in this particular area. Teenagers moving into early motherhood face parental stress because of the lack of social support systems in their communities most especially if they have a strained relationship with their partner or family (Ellis- Sloan et al., 2019). Flaherty et al. (2022), indicate that almost 30% of teenage mothers with children report clinically high parental stress levels at any given time throughout a period of six months after birth. Whereas, 57% of teenage mothers were found with postnatal depression due to inadequate social support (Sangsawang et al., 2019). Despite this high prevalence, few students have been conducted to examine the relationship between parental stress, social support and postnatal depression among teenage mothers. Therefore, the aim of the study was to investigate the relationship between Parental Stress, Social Support and Postnatal Depression among teenage mothers at Kasangati Health entre IV.

Materials and Methods

Design

A quantitative correlational study design was used because of its strength in determining the existence of a relationship between two or more variables (Haynes-Brown, 2022). Mother-infant dyads were assessed from 0-6months.

Study Selection

The study population comprised of 103 teenage mothers with infants from 0-6 months after child birth from Kasangati Health Centre IV and a systematic random sampling strategy was used as a method of selection of participants.

Procedure

The research project was approved by the School of Psychology and Makerere University School of Health Sciences Research and Ethics Committee / Institutional Review Board IRB (MAKSHSREC- 2022-379) for data to be collected from the hospital facility.

Ethical Considerations

The matter of confidentiality and information sharing was discussed with the participants before the questionnaires were distributed. Participants were informed that participation in the

study was entirely optional, and that they would opt out at any moment if they believed it was necessary. They were required to read and sign consent forms. Letters of the alphabet were used to conceal the participants' identities on the questionnaires like PA, PR, PF, and other letters were used to refer to them. To maintain the health measures recommended by the government during the COVID-19 pandemic (Ministry of Health Ugandan government (2020), I carried hand sanitizers and masks during the study. Participants were encouraged to employ the social distancing policy, wear their masks and sanitize during the study. Participants who experienced major distress during the data collection process were referred to mental health providers at the health center.

Data Collection

Data was collected and managed numerically using the social demographic questionnaire which included age of the teenage mother, in school, out of school, marital status and their religion. The 12 Multi-dimensional Scale of Perceived Social Support (MSPSS) questionnaire, (Zimet et al., 1988) was used. It was validated in Uganda at six weeks postnatal on mothers who had taken their infants for immunization and was found to be valid and reliable (Nakigudde et al., 2009). The 18 item Parental Stress Scale (PSS) self-report questionnaire (Berry & Jones, 1995) was used. It has been used in Uganda with its reliability cronbach's alpha at .83 and its validity cronbach alpha at .81 (Nabunya et al., 2023). The 10-item Edinburgh Postnatal Depression Scale (EPDS) questionnaire (Cox, 1983) was used. It has been used in rural Uganda with a cut-off point of 10 and was found to be valid and reliable (Kakyo et al., 2012).

Table 1: *Reliability Analysis of the Study Questionnaire*

Scales	n	A
Parental Stress Questionnaire	18	.744
The Multidimensional Scale of Perceived Social Support (MSPSS)	12	.800
The Edinburgh Postnatal Depression Scale (EPDS)	10	.687

Note: n= number of items; α= Cronbach's alpha

The Cronbach's alpha was used to measure the reliability of the instruments used in the study. The results from this analysis showed that the Parental Stress Questionnaire and The Multidimensional Scale of Perceived Social Support (MSPSS) had a high internal consistency of .744 and .800 respectively. The Edinburgh Postnatal Depression Scale (EPDS) had an acceptable internal consistency of .687 (See table 1).

Inclusion criteria

For this study, teenage mothers who were available in the hospital facility and showed their willingness and interest in participating in the study were considered and included. One hundred three (103) teenage mothers with babies between 0-6 months were considered using the systematic random sampling strategy for selection. The ages of the participants ranged from 11 to 17.

Exclusion criteria

Teenage mothers who were physically and mentally distressed hence unable to withstand the interview process at that point in time were excluded.

Data Analysis

Collected data was checked for incompleteness and errors. After coding all the 103 questionnaires, data was entered into Statistical Packages for Social Scientists (SPSS) version 23 (IBM, 2015). Computation of frequencies for all items on the questionnaire were all done, followed by an inferential statistical analysis test using Chi-square to measure the statistical relationship between the study's first three hypotheses. Chi-square was chosen because the variables are categorical. Similarly, the magnitude of correlation as well as the direction of the relationship needed to be examined. Hypothesis four which stated that social support significantly moderates the relationship between parental stress and postnatal depression was tested using regression analysis.

Results

The results are presented according to the four hypotheses that guided the study. It is divided into three sections. The first section is the introduction. The second section looks at demographics of the respondents. The third section looks at the prevalence of parental stress, social support and postnatal depression. Section four focuses on the association between Parental Stress, and Postnatal Depression among teenage mothers. Section five covers the association between Parental Stress and Social Support among teenage mothers. Section six focuses on the relationship between Social Support and Postnatal Depression among teenage mothers. The last section covers the moderating role of Social Support on the relationship of Parental Stress and Postnatal Depression among teenage mothers.

Demographic Information

Respondents were asked to indicate their age, gender, education level, marital status, occupation and religion. Frequencies were obtained and transformed into percentages as indicated in Table below;

Table 2: *Participant Demographics*

Variables	Levels	Frequency (N)	Percentage (%)
Age	13-14	18	17.8
	15-17	83	82.2
Education level	Primary	39	40.6
	O'level	40	41.7
	A'level	17	17.7
Marital status	Married	21	22.1
	Not married	58	61.1
	Divorced	16	16.8
Religion	Christianity	59	57.8
	Muslim	29	28.4
	Others	14	13.7

Table 2 indicates that most participants were between the ages of 15 and 17, accounting for 82.2% of the total. It also demonstrates that most participants had O' level (Ordinary level), making up 41.7% of the total, followed by those who had primary level, making up 40.6%, and those who had A' level (Advanced level), making up 17.7% of the total. Table 2 also reveals that most participants were single 61.1%, followed by married people 22.1%, and the minority group (divorced people, 16.8%). It further demonstrated that participants who were employed made up 63.0% of the total, while participants who were self-employed were 37.0 percent. It also showed that Christians made up most participants 57.8% followed by Muslims, who comprised 28.4%, while participants of other religions made up the smallest percentage of 13.7 percent.

Prevalence of Parental Stress, Social Support, Postnatal Depression among teenage mothers

Table 3: Prevalence for Parental Stress, Social Support, Postnatal Depression among Teenage Mothers

Characteristics	n=103(%)
Parental Stress	
Low	58(6.3)
High	45(43.7)
Postnatal Depression	
Not Depressed	20(19.4)
Depression	83(80.6)
Social Support	
Low	92(89.3)
High	11(10.7)

Note. n=number of respondents; %=percentages

Majority of the teenage mothers with low social support reported low at parental stress and very high at postnatal depression.

Parental Stress and Depression among teenage mothers

Table 4: *Association between Parental Stress and Depression among Teenage Mothers*

	Not Depressed n(%)	Depressed n(%)	X^2	df	
Parental Stress					
Low	12(60.0)	46(55.4)	.137	1	0.711
High	8(40)	37(44.6)			

Note. n=number of respondents; x^2 =chi-square; df=degrees of freedom p=level of significance

Hypothesis: There is a significant relationship between parental stress and postnatal depression.

The alternative hypothesis was rejected. There was no significant association between parental stress and postnatal depression $\chi 2$ (1, n =103) = 0.137, p=0.711 among teenage mothers (see table above 4). This implies that high levels of parental stress are not associated with Postnatal depression among teenage mothers.

Parental Stress and Social Support among Teenage Mothers

Table 5: *Association between Parental Stress and Social Support* among Teenage Mothers

	Not Stressed n(%)	Stressed n(%)	X^2	df	*p*
Social Support					
Low	48(82.8)	44(97.8)	5.992	1	0.014
High	10(17.2)	1(2.2)			

Note. n=number of respondents; x^2 =chi-square; df=degrees of freedom p=level of significance

Hypothesis: There is a significant relationship between parental stress and social support.

The alternative hypothesis was accepted. There was a significant association between parental stress and social support x^2 (1, n =103) = 5.992, p=0.014 among teenage mothers (see table above 5). This implies that low levels of social support are associated with parental stress among teenage mothers.

Social Support and Depression among Teenage Mothers

Table 6: *Association between Social Support and Depression* among Teenage Mothers

	Not Depressed n(%)	Depressed n(%)	X^2	df	
Social Support					
Low	.8(90.0)	4(89.2)	.012	1	.913
High	2(10.0)	9(10.8)			

Note. n=number of respondents; x^2 =chi-square; df=degrees of freedom; p=level of significance

Hypothesis: There is a significant relationship between social support and postnatal depression.

The alternative hypothesis was rejected. There was no significant association between social support and Postnatal depression x^2 (1, n =103) = 0.12, p=0.913 among teenage mothers (see table above 6). This implies that levels of social support are not associated with postnatal depression among teenage mothers.

Regression Analysis of Social Support on Parental Stress and Postnatal Depression

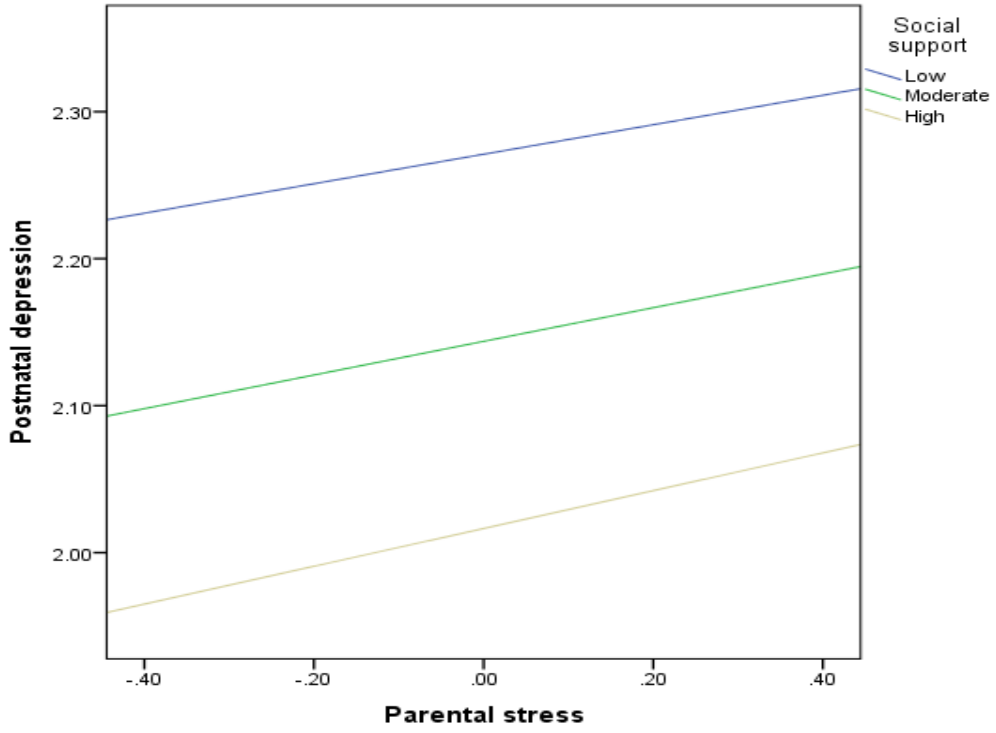
The fourth hypothesis stated that the relationship between parental stress and postnatal depression is significantly moderated by social support among teenage mothers. To test this hypothesis, the regression analysis model was used at a level of 0.05, and the findings are shown in Table below 7;

Table 7: *Moderation Role of Social Support on Parental Stress and Postnatal Depression*

Predictors	Postnatal Depression					
	B	Se	T	P	CI	
					LLCI	ULCI
Constant	2.1438	.0383	55.98	.00	2.07	2.21
Parental Stress	.1143	.1029	1.11	.27	-.09	.32
Social Support	-.1338	.0408	-3.27	.00	-.21	-.05
Interactional effect	.0149	.1157	.12	.89	-.21	..24
Modal summary R^2= .11, F= 4.13, p<0.01						
AR^2 due to moderation R2= .00, F= .02, p= .89						
Conditional moderating effect						
	B	Se	T	P	LLCI	ULCI
Low	.11	.15	.68	.49	-.19	.39
Average	.11	.10	1.11	.27	-.09	.31
High	.12	.15	.83	.40	-.18	.43

Results in Table 7 above show that social Support does not significantly moderate the relationship between parental stress and postnatal depression since the p value of the interactional effect is greater than 0.05. Therefore, hypothesis four is rejected thus concluding that social support does not significantly moderate the relationship between parental stress and postnatal depression.

Graph 1: *The Interaction Between Variables*



The graph above indicates that postnatal depression tends to decrease at higher levels of parental stress for teenage mothers with higher social support. However, postnatal depression for teenage mothers with low social support tends to increase at higher levels of parental stress.

Discussion

Parental Stress and Postnatal Depression

Findings emanating from this study show that parental stress and postnatal depression are not significantly related. This indicates that although teenage mothers may experience parental stress, this might not mean that they are prone to postnatal depression. The outcome of the current study is therefore contrary to other studies like that of Hawes et al. (2022) who found out that teenage mothers who have clinically relevant symptoms of parental stress without meeting the full criteria for this condition may be at risk for later postnatal depression, but also for other deleterious outcomes. Similarly, results from other African studies also indicate similar findings. For instance, Osok et al. (2018), found parental stress to be significantly related to postnatal depression among Kenyan teenage mothers, stating that postnatal depression is heightened when there is predisposal to parental stress and other health disorders. Yan et al. (2021), also reported that if parental stress is not effectively managed and responded to, it can result into postnatal depression and even interfere with the normal growth of the baby of a teenage mother. Dell'Osso et al. (2021), also found out a significant link between postnatal depression and parental stress. He went further to indicate that the severity of stress affects the severity of depression.

Based on the hopelessness theory of depression (Abramson et al., 1978) which was a basis of this study, it is more likely that teenage mothers with vulnerability parental stress patterns are at a high risk of developing postnatal depression. Although, the indicated results above differ from the result obtained from the current study where parental stress was not found to be associated with postnatal depression, these indicated differences may have emerged from the methodologies used including the sample size and instruments. Similarly, the demographic characteristics like age, education, marital status, and religion, among others, of the participants may have also played a role in explaining these differences.

Parental Stress and Social Support

Results from the study indicated that there is a significant relationship between parental stress and social support among teenage mothers. Implying that teenage mothers who are experiencing parental stress always recognize social support from those around them. The findings are in agreement with most of the studies that have shown a significant relationship between parental stress and social support. For example, Shpiegel et al., (2022) found out that teenage mothers who have greater social support (e.g., family, friends, husband) have better mental health outcomes than those who have less support and have been linked to a lower overall parental stress level. Furthermore, Ren et al. (2020), found out that social support from the family, friends, or neighbours works as a defense against parental stress especially during problem solving. Rea et al. (2021), concluded that some of the benefits of social support include reduced parental stress and better health outcomes for both mother and infant. Social support in teenage mothers may elicit favourable neuroendocrine responses that buffer the effects of parental stress resulting in better confinement according to Jones et al., (2019) findings. Oladeji et al. (2022), found out that parental stress among teenage mothers is linked to difficult relationships with family members, especially with their mothers, partners, classmates, and the society in which they live in.

Social Support and Postnatal Depression

Findings of the study indicated a no significant relationship between the two variables thus concluding that social support and postnatal depression are not significantly related among teenage mothers. Implying that a teen mother's experience of postnatal depression is not dependent on the social support she obtains. However, the findings of the study are contrary to Scardera et al. (2020), who found out that social support has a protective effect on postnatal depression among teenage mothers. In addition, the mental strain of pregnancy and child rearing can lead to postnatal depression, particularly when the mother is also a teenager who will require strong social support to cope with motherhood at that vulnerable age. This was a similar result found by Hendrick (2019), who concluded that social factors such as educational attainment and family structure play a part as both influencers and consequences of postnatal depression in the lives of teenage mothers and their babies. Due to the levels of postnatal depression, teenage mother's levels of well-being are affected and other joint factors like levels of social support (Badr, 2021). Teenage mothers with inadequate social support face challenges of postnatal depression and low levels of well-being (Ellis, 2020).

Moderation Effect of Social Support on Parental Stress and Postnatal Depression

The study findings indicated that social support does not significantly moderate parental stress and postnatal depression among teenage mothers. It is implied that postnatal depression may not be significantly influenced by whether or not teenage mothers obtain social support following difficult parenting experiences. However, the results are contrary to those of Woo (2021), who discovered that social support has been connected to parental stress and postnatal depression in teenage mothers and has been proven to increase their presence. These results are related with those of Cone et al. (2021), who found out that decreased social support can result into teen motherly complications hence parental stress and other complicated issues for healthcare practitioners such as postnatal depression, which should be knowledgeable with the special circumstances of the teenage mothers they serve. Additionally, Hazelgrove et al. (2021), carried out a comprehensive review and concluded that high social support reduces parental stress and postnatal depression.

Furthermore, Abramson et al. (1978)'s helpless theory of depression, states that teenage mothers who have had a child experience cognitive vulnerabilities marked by hopeless depression and parental stress because they were not socially, physically and emotionally prepared to have children, which may significantly contribute to postnatal depression. However, because of the presence of social support, it may prevent a teenage mother from losing hope for a better future (Brown, 1986).

Study Limitations

Despite the fact that the study looks at how parental stress, social support, and postnatal depression in teenage mothers are related, due to the manner of the approach employed for data collection, a lot of information such as what may be the underlying cause of parental stress and postnatal depression was missed. Data was gathered using pre-made self-administered questionnaires. Therefore, a qualitative method is advised to record teenage mothers' perceptions and experiences both before and after giving birth. Another limitation was that the study focused its investigation to only one geographical region (Wakiso district), expanding to other districts would be more enriching. Despite these limitations, the findings add to our understanding the importance of the relationship between parental stress, social support and postnatal depression.

In fact, teenage mothers are in a strategic position to include strategies that strengthen their well-being which in turn will have an impact on their challenges.

Conclusion

Examining the relationships between parental stress, social support, and postnatal depression was the study's main goal. The study's findings showed no substantial link between parental stress and postnatal depression, indicating that a teenage mother's experience with parental stress is unrelated to postnatal depression. This may be as a result of a variety of circumstances, not just because of parental stress, including hereditary factors, protracted labour pains, and many more, which can also cause postnatal depression in teenagers. When it came to the relationship between parental stress and social support findings indicated that there was significant correlation between the two variables, indicating that teenage mothers who are experiencing parental stress are aware of social support they receive from others around them. Additionally, the findings indicated no significance in the relationship between social support and postnatal depression, indicating that a teenage mother's experience with postnatal depression is not related to whether she receives social support or not. Lastly, findings show that social support plays no significant moderating role in the relationship between parental stress and postnatal depression in teenage mothers. This suggests that teenage mothers who are experiencing parental stress and postnatal depression may not always recognize social support from those around them especially after going through trying times as first-time mothers like rejection from their families and stigmatization from the society.

References

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psycholog, 87, 49, 74*.

Amoadu, M., Hagan, D., & Ansah, E. W. (2022). Adverse obstetric and neonatal outcomes of adolescent pregnancies in Africa: A scoping review. *BMC Pregnancy and Childbirth*, *22*(1), 1-11.

Badr, H. A., Zauszniewski, J. A., Quinn Griffin, M., Burant, C. J., Przeworski, A., Almutairi, W. M., & Alsharif, F. H. (2021). Effects of postpartum fatigue and depressive cognitions on life satisfaction and quality of life in Arab postpartum women: the intervening role of resourcefulness. *Nursing Reports*, *11*(1), 84-94.

Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

Berry, J. O., & Jones, W. H. (1995). The parental stress scale: Initial psychometric evidence. *Journal of social and personal relationships*, *12*(3), 463-472.

Cone, J. N., Hendrick, C. E., Owotomo, O., Al-Hamoodah, L., & Maslowsky, J. (2021). Socioeconomic well-being in early adulthood among repeat versus one-time teenage mothers. *Youth & society*, *53*(7), 1090-1110.

Cox, J. L. (1983). Postnatal depression: A comparison of African and Scottish women. *Social Psychiatry, 18,* 25–28. http://dx.doi.org/10.1007/bf00583384

Dell'Osso, B., Cafaro, R., & Ketter, T. A. (2021). Has Bipolar Disorder become a predominantly female gender related condition? Analysis of recently published large sample studies. *International journal of bipolar disorders*, *9*(1), 1-7. https://doi.org/10.1186/s40345-020-00207-z

Ellis, B. (2020). An Examination of Parental Locus of Control, Stress, Social Support, and Depression Among Parents of Children and Adolescents with Intellectual Disabilities.

Ellis-Sloan K. (2019). Teenage mothers in later life: time for a second look. *Journal of adolescence*, 1;77:98-107. https://doi.org/10.1016/j.adolescence.2019.10.007

Flaherty, Serena C., and Lois S. Sadler. (2022). "Parenting Stress Among Adolescent Mothers: An Integrative Literature Review." *Western Journal of Nursing Research*: 01939459211014241.

Gregorio, V. (2018). The only exception: teenage pregnancy in the Philippines. *Rev Women's Study, 28, 28.*

Haynes-Brown, Tashane K. (2022). "Using Theoretical Models in Mixed Methods Research: An Example from an Explanatory Sequential Mixed Methods Study Exploring Teachers' Beliefs and Use of Technology." *Journal of Mixed Methods Research*. 15586898221094970. https://doi.org/10.1177/15586898221094970

Hawes, D.J., & Dadds, M.R. (2022). Case complexity and resistance to change in the treatment of child conduct problems. In J.L. Allen, D.J. Hawes, & C.A. Essau (Eds.), *Family-based intervention for child and adolescent mental health: A core competencies approach* (pp. 119–135). Cambridge, UK: Cambridge University Press.

Hazelgrove, K., Biaggi, A., Waites, F., Fuste, M., Osborne, S., Conroy, S., ... & Dazzan, P. (2021). Risk factors for postpartum relapse in women at risk of postpartum psychosis: the role of psychosocial stress and the biological stress system. *Psychoneuroendocrinology*, 128, 105218.
https://doi.org/10.1016/j.psyneuen.2021.105218

Hendrick, C. Emily, and Julie Maslowsky. (2019). "Teen mothers' educational attainment and their children's risk for teenage childbearing." *Developmental psychology, 55*(6), 1259. https://doi.org/10.1037/dev0000705

Jones, Catriona, et al. (2019). "Other girls': A qualitative exploration of teenage mothers' views on teen pregnancy in contemporaries." *Sexuality & Culture*, *23*(3), 760-773. https://doi.org/10.1007/s12119-019-09589-4

Kakyo, T. A., Muliira, J. K., Mbalinda, S. N., Kizza, I. B., & Muliira, R. S. (2012). Factors associated with depressive symptoms among postpartum mothers in a rural district in Uganda. *Midwifery, 28*(3), 374–379. http://dx.doi.org/10.1016/j.midw.2011.05.001

Ministry of health Ugandan government (2020). A healthy and productive population. https://www.health.go.ug/ MoES (2020). Revised Guidelines for the Prevention and Management of Teenage Pregnancy in School Settings In Uganda. GoU Printers

Molek K & Bellizzi S. (2022). Teenage motherhood in Africa: The epidemic in the COVID-19 pandemic. *Int J Gynecol Obstet*, *158*, 218-219. https://doi.org/10.1002/ijgo.14144

Nabunya P, Sensoy Bahar O, Neilands TB, Nakasujja N, Namatovu P, Namuwonge F, Mwebembezi A, Ssewamala FM. Bridges-Round 2: A study protocol to examine the longitudinal HIV risk prevention and care continuum outcomes among orphaned youth transitioning to young adulthood. *PLoS One*. 2023 May 10;18(5):e0284572. doi: 10.1371/journal.pone.0284572. PMID: 37163564; PMCID: PMC10171655.

Nakigudde, J., Tugumisirize, J., & Musisi, S. (2008). Validation of the SRQ-20 in a primary care setting in Kampala, Uganda. In Sida-SAREC Makerere Research Collaboration (2001–2009) Dissemination Conference. Kampala. Makerere University.

Ngwira, Glad Tako, and Zhuo Lulin. (2021). "Factors associated with Post-Natal Care (PNC) services utilization among adolescent mothers in rural northern Malawi." *Am J Public Health* 9 (2021): 38-47. HYPERLINK "https://doi.org/10.1353/plo.2021.0095"

Oladeji, Bibilola D., et al.(2022). "Prevalence and correlates of depression among pregnant adolescents in primary maternal care in Nigeria." *Archives of Women's Mental Health, 25*(2), 441-450. https://doi.org/10.1007/s00737-021-01198-1

Osok J., Kigamwa P., Vander Stoep A., Grote N., Huang K-Y., Kumar M. (2018). Adversities and Mental Health Needs of Pregnant Adolescents in Kenya: Identifying interpersonal, practical and cultural barriers to care. BMC Women's health; special issue on structural violence and inequalities (under revision).

Pueyo, J. (2022). Moms Too Soon: Status and Challenges of Teenage Mothers- Implications for Exension. *Journal of International Women's Studies, 23*(6), 6.

Rea, C. J., & Cox, J. (2021). Social Support and Depression Among Adolescent Mothers. In *Encyclopedia of Quality of Life and Well-Being Research* (pp. 1-7). Cham: Springer International Publishing.

Ren, Jie, et al. (2020). "The influence of factors such as parenting stress and social support on the state anxiety in parents of special needs children during the COVID-19 epidemic." *Frontiers in psychology*, *11*, 565393

Sangsawang, B., Wacharasin, C. & Sangsawang, N. (2019). Interventions for the prevention of postpartum depression in adolescent mothers: *A Systematic Review. Arch Women's Mental Health, 22*, 215-228. https://doi.org/10.1007/s00737-018-0901-7

Scardera, Sara, et al. (2020). "Association of social support during adolescence with depression, anxiety, and suicidal ideation in young adults." *JAMA network open, 3*(12) e2027491-e2027491. https://doi.org/10.1001/jamanetworkopen.2020.27491

Shpiegel, Svetlana, et al. (2022). "Early fatherhood and socioeconomic outcomes among young men transitioning from foster care in the United States." *Children and Youth Services Review, 133,* 106346. https://doi.org/10.1016/j.childyouth.2021.106346

United Nations Children's Fund, 'Battling the Perfect Storm: Adapting programmes to end child marriage during COVID-19 and beyond', Child Protection Learning Brief #3, UNICEF, New York, March 2021. *Journal of reproductive and infant psychology*, *1-15.*

Woo, Jihee, Hyojin Choi, and Rafael Engel. (2021). "Economic stress and life satisfaction in retirement among Korean older adults: The roles of different types of social support." *Journal of Gerontological Social Work, 65*(1), 97-111. https://doi.org/10.1080/01634372.2021.1937430

Zimet, G.D., Dahlem, N.W., Zimet, S. G., & Farley, G.K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2