

Prevalence of Teenage Parenthood and Subsequent Burden on Elderly Family Members in Bungoma North Sub-County, Kenya

Wilbrodah Adhiambo Orina (PhD)

Education Consultant, Core Health and Wealth International, P.O BOX 8304 – 30100, Eldoret.

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.803456S>

Received: 02 December 2024; Accepted: 07 December 2024; Published: 08 January 2025

ABSTRACT

The prevalence of teenage parenthood presents significant social and economic challenges, especially in developing countries, where it often leads to increased dependency on elderly family members. This paper assessed the prevalence of teenage parenthood and examined the resulting dependency burden on elderly caregivers in Bungoma North Sub-County. Hagel's Theory of Responsibility and Theory of Reasoned Action were used to underpin the study. A cross-sectional study design was used, involving a sample of 143 teenage mothers and pregnant teenagers from 10 schools. Stratified random sampling involved dividing the population into subgroups of ten schools and then randomly selecting participants from each subgroup. This ensured that the sample is representative of the population across the different subgroups. The sample included girls who were either pregnant or had recently given birth. Data were collected through structured questionnaires, focusing on socio-demographic characteristics, caregiving arrangements, and family dynamics. Descriptive statistics and regression analysis were employed to interpret the data. The findings revealed that elderly family members, particularly those aged 56 and above, bear the brunt of caregiving responsibilities, with 27% of caregivers aged 66 or older. A high prevalence of teenage pregnancy in Bungoma North Sub County, Kenya, leads to significant reliance on elderly family members for childcare, placing strain on their physical, emotional, and financial well-being. This burden is further exacerbated by limited support from other family members and inadequate access to external resources, leaving elderly caregivers feeling socially isolated and financially strained. The study highlights the need for targeted support systems, including social services, caregiver training, and psychological support, to ease the caregiving burden. Additionally, enhanced programs addressing teenage pregnancy prevention and education are crucial to reducing the long-term dependency burden on elderly caregivers and keeping teenage girls in school.

Keywords: Teenage, Parenthood, Elderly, Caregivers, Dependency

INTRODUCTION

The purpose of this paper was to assess the extent of teenage pregnancy and motherhood among girls in Bungoma North Sub County. The study calls for immediate action by stakeholders in order to arrest the issue and retain young girls in school. This would give them a bright future as education is an equalizer.

Background of the study

Teenage parenthood remains a significant concern for both education and public health stakeholders, with far-reaching consequences for adolescent mothers, their children, and their extended families. The phenomenon is deeply rooted in complex social, economic, and cultural factors, often exacerbated by gender inequality, limited access to reproductive health services, and persistent stigma surrounding adolescent sexuality (Cabral & Brandão, 2020). These underlying issues contribute to the marginalization and discrimination faced by teenage mothers, compounding their challenges and frequently leading to poor health outcomes for both mother and child (Karaçam et al., 2021; Wittenberg et al., 2022).

The impact of teenage pregnancy extends beyond the immediate family, often burdening elderly relatives with unexpected caregiving roles. While kinship care is considered the most sustainable and affordable form of childcare in Africa, with parental care being optimal (Ariyo et al., 2019), the reality for many teenage parents involves reliance on grandparents or great-grandparents. These elderly caregivers may be ill-equipped physically and emotionally to meet the demanding needs of infant care (Marino et al., 2016), creating a precarious situation where both the child's and caregiver's well-being are compromised. Newborns may receive insufficient attention crucial for their development, while elderly caregivers face increased stress and responsibilities that significantly impact their health and quality of life.

This dynamic is further complicated by cultural ideals of filial caregiving responsibility, which can differ by gender and are allocated among siblings (Friedemann-Sánchez, 2012), suggesting that caregiving burdens may not be evenly distributed even within extended families. To cope with these challenges, many elderly caregivers find themselves forced to seek additional income, despite their advanced age and potential health limitations (Burley et al., 2022). This necessity often pushes them into the informal job market, where they risk exploitation and engagement in physically demanding or hazardous work unsuitable for their age. Such circumstances not only endanger the health and well-being of the caregivers but also further compromise the quality and consistency of care provided to the children.

This complex situation perpetuates a cycle of hardship that is difficult to break. Children raised in these challenging circumstances may struggle to escape environments characterized by unemployment and poverty, conditions closely linked to the incidence of teenage pregnancy. As these children grow, the absence of stable, nurturing, and economically secure backgrounds increases the likelihood of repeating patterns of teenage pregnancy and early parenthood (Tabei et al., 2021). This cycle perpetuates socioeconomic challenges, emotional instability and health disparities within communities, underscoring the need for comprehensive interventions that address not only teenage pregnancy prevention but also support for young parents, their children, and the elderly caregivers who often bear the brunt of these societal issues.

Addressing these interconnected challenges requires a multifaceted approach that includes improved access to family planning for those in marriages, comprehensive sexuality education, and targeted support for teenage parents and their extended families (Legawati et al., 2019). By tackling the root causes and providing supportive interventions for all parties involved, communities can work towards breaking the cycle of teenage pregnancy and its associated hardships, ultimately improving outcomes for multiple generations.

Statement of the problem

Teenage parenthood is a growing concern in Kenya and Uganda (Masaba et al., 2022). Bungoma County has taken a fair share of the issue given that it lies close to the border of Kenya and Uganda (Mkutu & Mkutu, 2019). Young parents face challenges that extend beyond their own socioeconomic struggles, impacting the well-being of elderly family members who often serve as their primary caregivers (Carr & Utz, 2020). Due to limited education, unemployment, and financial instability, teenage parents increasingly depend on elderly relatives for financial, emotional, and physical support (Nomaguchi, & Milkie, 2020). This dependency places a significant burden on elderly caregivers, who are already vulnerable and frail due to aging, declining health, and limited financial resources (Khan, et al., 2024). The burden of teenage pregnancy and teenage motherhood is a load that drains the already insufficient resources in the hands of elderly grand parents to leave them completely impoverished. This introduces them to financial struggles and prevents them from enjoying a relaxed retirement period. Instead, they begin the parenting journey all over again.

Existing studies have primarily focused on the individual socioeconomic and health impacts of teenage parenthood, with limited attention paid to the intergenerational dependency it creates, particularly on elderly family members. While literature explores teenage parenthood in relation to poverty, education, and healthcare access, little is known about how this phenomenon affects elderly caregivers, specifically in rural Kenyan settings like Bungoma North Sub County. Additionally, there is a gap in understanding the coping mechanisms elderly caregivers adopt and the long-term impact of these caregiving responsibilities on their well-being. This study sought to fill these gaps by investigating the prevalence of teenage parenthood in

Bungoma North Sub County, coping mechanism for elderly caregivers, and the subsequent burden placed on elderly family members. It will further explore the coping strategies of these elderly caregivers and evaluate how the caregiving role affects their physical, emotional, and financial well-being. Understanding these dynamics is critical to developing effective interventions to support both teenage parents and elderly caregivers in similar contexts.

General Objective

To explore the prevalence of teenage parenthood and subsequent dependency burden on elderly family members.

Specific Objectives

1. To determine the prevalence of teenage parenthood in Bungoma North Sub County.
2. To explore the dependency level of teenage parenthood on the elderly population
3. To investigate the coping mechanisms of elderly family members caring for teenage parents and their children in Bungoma North Sub County.
4. To evaluate the effect of teenage parenthood on the compromised well-being of elderly caregivers in Bungoma North Sub County.

Hypothesis

H₀₁ The combined effect of teenage parenthood, dependency burden, and elderly coping mechanisms has no significant influence on the compromised well-being of elderly caregivers in Bungoma North Sub County.

Significance of the study

This study examined the impact of teenage pregnancy on elderly caregivers in western Kenya, highlighting the significant burden placed on older family members who often assume caregiving roles. It explores the prevalence of teenage motherhood, the physical, financial, and emotional challenges elderly caregivers face, and the socio-cultural factors influencing these dynamics. The findings emphasize the need for targeted interventions to support both teenage mothers and their caregivers, addressing educational, health, and social service gaps. The study aims to inform policies that promote equitable care structures and improve the well-being of vulnerable populations.

LITERATURE REVIEW

Theoretical framework

Hegel's Theory of Responsibility, originally developed by philosopher Friedrich Wilhelm Joseph Schelling, explores the nature of responsibility in relation to human agency and moral decision-making (Sedgwick, 2006). It posits that individuals are morally accountable for their actions due to their capacity for rational and conscious choice (Meyer et al., 2023). Additionally, the theory emphasizes collective responsibility, suggesting that individuals are also responsible for the actions of groups or collectives they belong to, and these responsibilities are shaped by social and historical contexts (Roy et al., 2024). This theory is particularly relevant to issues like teenage pregnancy, as it acknowledges the influence of societal factors, including gender inequalities, education, and support systems on individual decisions. Furthermore, the concept of collective responsibility highlights the shared role of communities, families, and institutions in supporting young individuals through complex social challenges like teenage parenthood (Nomaguchi, & Milkie, 2020). However, the theory has been critiqued for overemphasizing individual responsibility while potentially neglecting the systemic constraints that influence decision-making. Critics like Sripada (2016) suggest that this could lead to a deterministic view where individuals are seen as products of their era, limiting the theory's applicability to contemporary ethical dilemmas. Hegel's Theory of Responsibility is still very applicable to this study as it calls for teenage mothers, fathers of their children, the government and the society at large to take responsibility of the vice for the part they play in this matter. A society that fails

to protect her children from early parenthood must be ready to shoulder responsibility for both set of children; the child and her baby.

Similarly, the Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen, provides a framework for understanding human behavior through the influence of attitudes and subjective norms (Hassan, 2022). The TRA's focus on intentions shaped by personal beliefs and social pressures is crucial for understanding teenage pregnancy decisions, where social norms and perceived support from family or peers can significantly affect choices like continuing education post-pregnancy (Saricam, 2018; Manchiraju, 2012). These theories not only emphasize the role of individual and collective responsibility in shaping behavior but also highlight the shared accountability for teenage parenthood. The responsibility lies not only with the teenage mother and her immediate family but extends to society as a whole. Caregiving for teenage mothers and their children thus becomes a communal responsibility, requiring societal support systems that can alleviate the burden on families and promote positive outcomes for both the teenage parents and their children.

Empirical review

The existing body of research provides a comprehensive examination of the social, obstetric, and economic complications associated with teenage pregnancy. Mann, Bateson, and Black (2020) offered insights into the role of general practitioners in addressing the needs of teenage mothers in Australia, while the Australian Institute of Health and Welfare (2022) highlighted a 40% decrease in births to teenage mothers between 2006 and 2017. Despite this decline, the persistence of poorer health outcomes for both mother and child underscores the continuing need for targeted interventions. Similarly, Goodreau (2022) discussed trends in the United States, revealing that while teen birth rates have declined since 1991, they remain disproportionately high compared to other developed nations. Dudley's (2021) bibliographic review further emphasized the broader societal implications, noting the direct link between teenage pregnancy and lower educational attainment, poverty, and adverse life outcomes for both mothers and their children.

The data collected by NHRC and UNICEF (2023, 2024) in Southeast Asia broaden the discussion by addressing the contextual factors driving adolescent pregnancy, such as marital status and girls' autonomy. These studies reinforce the need for multifaceted interventions that extend beyond the individual and incorporate societal influences, such as child marriage and social norms. The participatory timeline interviews conducted by Ayuandini et al. (2023) further contextualize the issue within Indonesia, highlighting the complexity of adolescent pregnancy pathways. Such studies underscore the global nature of teenage pregnancy and point to recurring patterns and systemic factors across different regions.

The burden on elderly caregivers, particularly those responsible for teenage mothers and their infants, is a significant concern, yet little attention is given to their coping mechanisms. Studies show varying levels of caregiver burden, from mild to severe, depending on factors such as the dependent person's level of need, the caregiver's age, and socioeconomic status (Naing et al., 2020; Gratão et al., 2013). Caregivers are predominantly female family members, often daughters or wives (Gratão et al., 2013; Pereira & Filgueiras, 2009), and are frequently left to manage caregiving with limited external support and inadequate knowhow. Preventive measures, early interventions, and help from multidisciplinary health teams are essential to alleviate this burden (Gratão et al., 2013). Respite services and psycho-social interventions have proven effective, but these solutions are not universally accessible (Garcés et al., 2010). Researchers stress the importance of improving caregiver assistance, especially by addressing socio-cultural factors (Pereira & Filgueiras, 2009), and recommend that community health nurses prioritize caregiver training and home visit programs (Naing et al., 2020). Though these recommendations are based on health issues, teenage parenthood greatly affects the health of those concerned; the teenage mother and her elderly caregiver.

While these studies contribute significantly to understanding the socioeconomic, cultural, and health-related factors influencing teenage pregnancy, there is a distinct gap in the literature concerning the impact of teenage pregnancy on elderly caregivers, particularly in terms of the psychological, financial, and physical burdens they bear. For instance, much of the literature, such as the findings by Asiimwe et al. (2021) in

Uganda and Muanda et al. (2020) in Kenya, focuses on adolescent mothers but fails to address the secondary compromised well-being of older family members who often become the primary caregivers. Moreover, although Kassa et al. (2018) and Malunga et al. (2023) identify critical drivers of adolescent pregnancy in sub-Saharan Africa, they do not delve into how these drivers exacerbate the caregiving responsibilities of the elderly. The coping mechanisms used by elderly caregivers, and the long-term effects of these responsibilities on their health and well-being, remain underexplored.

This gap in the literature highlights the necessity for further research that specifically examines how elderly caregivers navigate the challenges of raising children born to teenage mothers. Such studies could offer vital insights into the psychosocial support systems, coping strategies, and institutional frameworks needed to alleviate their burden. Addressing this research gap is critical to formulating comprehensive policies and interventions that account for the well-being of both teenage parents and their elderly caregivers, particularly in regions where multigenerational caregiving is common.

METHODOLOGY

The study employed a descriptive research design as per Taherdoost (2022) recommendations. Descriptive research designs have in the recent past been employed to investigate the burden experienced by caregivers of elderly patients with various chronic conditions (Jika, et al., 2021). In the current study, the target population comprised adolescent girls aged 15-19 from 10 selected secondary schools in rural western Kenya. A sample size of 143 girls was drawn using stratified random sampling, ensuring adequate representation from each school as recommended by Hossan (2023)'s recommendations in research with grouped population. The sample included girls who were either pregnant or had recently given birth, allowing for a focused examination of the factors contributing to adolescent pregnancy. Adolescent girls were administered structured questionnaires to collect data. The questionnaires were designed to gather demographic information, the prevalence of teenage pregnancy, educational disruption, and access to support systems. Trained research assistants collected the data in person, ensuring that participants fully understood the questions and responded accurately.

Reliability and Validity

To assess the internal consistency of the research instruments, Cronbach's Alpha was used for four key variables: prevalence of teenage parenthood, dependence burden, coping mechanisms of the elderly, and the impact on elderly well-being. The reliability of each variable was measured both by Cronbach's Alpha and Cronbach's Alpha based on standardized items. The results are summarized in the table 1.

Table 1: Reliability Statistics

Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Items
Prevalence of teenage parenthood	0.841	0.885	5
Dependence burden	0.919	0.942	5
coping mechanisms of elderly	0.844	0.901	5
Compromised elderly well-being	0.853	0.814	6

Source Research Data (2024)

The reliability of the research instruments was assessed using Cronbach's alpha, with values ranging from 0.841 to 0.919, indicating strong internal consistency (Tavakol & Dennick, 2011). Specifically, the prevalence of teenage parenthood ($\alpha = 0.841$), dependence burden ($\alpha = 0.919$), coping mechanisms of the elderly ($\alpha = 0.844$), and impact on elderly well-being ($\alpha = 0.853$) all demonstrated robust reliability. Following Kakar et al. (2023), content validity was ensured through expert review to ensure the instruments effectively captured the constructs relevant to the study.

Data Analysis

The data collected from the questionnaires were analyzed using both descriptive and inferential statistics. Descriptive statistics, including frequencies and percentages, were used to summarize the demographic characteristics and prevalence of teenage pregnancy in the sample. Inferential statistics, such as Pearson's correlation and regression analysis, were employed to test the relationships between teenage parenthood prevalence, dependency burden on the elderly, coping mechanism of the elderly, and impact on elderly well-being. Hypothesis testing was conducted at a 0.05 significance level to ensure the robustness of the findings.

Diagnostic tests were also conducted to validate the assumptions of the statistical models. The Kolmogorov-Smirnov test confirmed normality (Emanuel et al., 2020), and multicollinearity was assessed using tolerance and variance inflation factor (VIF) values (Senaviratna & Cooray, 2019). Additionally, the Breusch-Pagan test was used to check for heteroscedasticity, confirming that the variance of residuals remained constant, thereby strengthening the validity of the statistical analyses.

Ethical Considerations

This study adhered to strict ethical guidelines to ensure the protection of participants. Informed consent was obtained from all participants, and parental or guardian consent was secured for minors. Participants were fully informed of the study's objectives, procedures, and potential risks before participation. Confidentiality and anonymity were strictly maintained, with personal data anonymized to protect the participants' identities. Furthermore, participation was voluntary, and participants were informed of their right to withdraw from the study without consequences.

DATA ANALYSIS AND PRESENTATION

Table 2: is a summary of demographic information involving the sampled population.

Table 2: Demographic Information

	Options	Frequency	Percent
Age of teenage parent	Below 15	24	17%
	15-16	45	31%
	17-18	64	45%
	19 and above	10	7%
Total		143	100%
Mother's age at the first birth	Below 15	12	8%
	15-16	40	28%
	17-18	70	49%
	19 and above	21	15%
Total		143	100%
Who takes care of your child?	Parents/guardian	69	48%
	Grandparent	41	29%
	Another sibling	27	19%
	Well-wishers/Distance relative	6	4%
		143	100%
Age of your child's caregiver?	Below 35	4	3%
	35-45	9	6%

	46-55	43	30%
	56-65	49	34%
	66 and above	38	27%
		143	100%
How many people live with your child's caregiver	0 (only the child)	15	10%
	3-Jan	60	42%
	4 or more	68	48%
		143	100%

Source Research Data (2024)

Teenage parenthood predominantly affects those aged 17-18 (45%) and 15-16 (31%), with a critical 17-18 age range facing unique challenges. While many support programs target girls under 18, those turning 18 often become ineligible for assistance, limiting their educational and reintegration opportunities (Harding et al., 2020; Hovdestad et al., 2015). The 17% of teenage parents below 15 are particularly vulnerable, highlighting the need for early interventions. Almost half of teenage mothers (49%) have their first child between 17-18 years, with 28% giving birth between 15-16 years. This early onset of motherhood before 18 is concerning due to incomplete education, dependency on family and community, and barriers to receiving aid, especially for those becoming mothers at 17 or older. Even those giving birth at 19 or older (15%) face risks as they transition into adulthood with decreased support systems.

Childcare for teenage parents predominantly relies on older family members, with 48% depending on parents/guardians and 29% on grandparents. Most caregivers are 56 and older, with 27% being 66 or above, raising concerns about their capacity to provide adequate care due to potential health and financial limitations. Household sizes vary, with 48% of caregivers living in households of 4 or more people and 42% with 1-3 people. Notably, 10% of caregivers live alone with the child, which may lack sufficient support.

Prevalence and Distribution

Table 3: Teenage parenthood Prevalence factors

Statement	Mean	Std. Deviation
I have seen many girls in my school or neighborhood who have become mothers at a young age.	4.11	0.711
Many girls my age juggle school and raising children in my community.	3.97	0.948
I know other teenage girls balancing motherhood and their daily lives (school, work, etc.).	3.92	1.158
Many teenage girls in my community continue to receive support from their families after having children.	3.51	0.986
It is usual for teenage mothers to be part of everyday community life here.	3.47	1.183

Source Research Data (2024)

The observation of teenage motherhood had a high mean score of 4.11, indicating that respondents frequently see adolescent mothers in their communities. Balancing school and motherhood received a mean score of 3.97, showing that this challenge is commonly recognized. The awareness of other teenage girls managing motherhood and daily responsibilities scored a mean of 3.92, reflecting moderate recognition of this issue. Support from families for teenage mothers scored lower, at 3.51, suggesting family assistance is present but inconsistent. Lastly, the integration of teenage mothers into community life had a mean score of 3.47, indicating room for greater social inclusion.

Table 4: Dependence burden factors

Statement	Mean	Std. Deviation
An elderly family member is the primary person caring for my child so I can continue with school.	3.71	0.91
My elderly relative is the only person available to help raise my child.	3.35	1.19
Without the help of my elderly relative, I would not be able to continue my education.	4.13	1.27
My elderly relative often has to take on the role of caregiver and provider for my child.	4.14	1.02
My elderly relative provides most of the financial support needed to raise my child.	2.71	1.12
My elderly relative receives little to no assistance from other family members in raising my child.	3.89	1.31

Source Research Data (2024)

Elderly family members are often primary caregivers, with a high mean score of 4.14, which shows that many teenage mothers rely on them for child-rearing. Dependence on elderly relatives for continuing education is similarly high, scoring a mean of 4.13, indicating their critical support role. However, financial support from elderly relatives was rated lower, with a mean of 2.71, suggesting that financial resources are limited. Additionally, the burden on elderly caregivers is compounded by a lack of assistance from other family members, reflected in a mean score of 3.89.

Coping mechanism for elderly caregivers

Table 5: Coping mechanism factors

Statement	Mean	Std. Deviation
My child's caregiver has received financial or material assistance from the government or other organizations to help with caregiving.	3.98	1.084
My child's caregiver adjusts their schedule to balance caregiving responsibilities with other personal needs.	3.80	1.258
My child's caregiver has a support system (family, friends, neighbors) to help manage the care of my child.	2.23	1.157
My child's caregiver sometimes seeks external support (e.g., community programs) to cope with the responsibility of caregiving.	2.42	1.275
My child's caregiver has found ways to balance their well-being with the responsibility of raising my child.	2.30	1.245

Source Research Data (2024)

The analysis of coping mechanism factors reveals significant challenges faced by elderly caregivers of children born to teenage mothers. While some receive financial or material assistance (Mean = 3.98, SD = 1.084), support from family or external sources is limited, as reflected by low mean scores for having a support system (Mean = 2.23, SD = 1.157) and seeking external support (Mean = 2.42, SD = 1.275). Moreover, caregivers struggle to balance their well-being with caregiving responsibilities, highlighting their overall burden.

Table 6: Compromised well-being of Elderly Caregivers Factors

Statement	Mean	Std. Deviation
My child's caregiver's physical health has been affected by the responsibility of raising my child.	2.13	1.388
The caregiving responsibility has negatively impacted my child's caregiver's financial situation.	4.17	1.172

My child’s caregiver has had to give up or reduce work or social activities to care for my child.	4.15	1.39
My child’s caregiver often expresses feelings of stress and exhaustion related to caring for my child.	2.45	1.135
The responsibility of raising my child has caused my child's caregiver to feel socially isolated.	4.37	1.162

Source Research Data (2024)

The analysis of the impact on elderly caregivers reveals significant challenges those supporting teenage mothers face. The statement regarding social isolation received the highest mean score of 4.37, indicating that many caregivers feel socially isolated due to their responsibilities. This is closely followed by financial strain, with a mean of 4.17, highlighting that the financial situation of caregivers is adversely affected by their caregiving roles. Additionally, the need to reduce work or social activities to manage caregiving responsibilities was reflected in a mean score of 4.15, underscoring caregivers' sacrifices in their personal lives. Conversely, the physical health of caregivers showed a lower mean score of 2.13, suggesting that while the other factors strongly impact their well-being, physical health issues may not be as prominently reported. Feelings of stress and exhaustion, rated with a mean of 2.45, also indicate that while stress is present, it may not be as severe as the financial and social challenges. These findings illustrate the heavy burden placed on elderly caregivers, particularly concerning their financial stability and social well-being.

Diagnostic test

Test for Normality

The normality of the frequency distribution was assessed using the Kolmogorov-Smirnov test, as shown in Table 4.6. This test was chosen because the 143 analyzed responses exceeded 100, aligning with the recommendation by Emanuel et al. (2020) for larger samples. The results of the Kolmogorov-Smirnov test revealed significance levels greater than 0.05 for all significant variables, indicating that the data distribution follows a standard curve. This normality in distribution supports using parametric statistical methods in subsequent analyses.

Table 7: Test for Normality

	Kolmogorov-Smirnova		
	Statistic	df	Sig.
Impact on Elderly	.024	143	.080*
Coping Mechanism	.025	143	.197
Dependency	.016	143	.200*
Prevalence of Pregnancy	.016	143	.200*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source Research Data (2024)

Test for Multicollinearity

Multicollinearity was assessed using tolerance and variance inflation factor (VIF) measures. According to Se naviratna and Cooray (2019), multicollinearity can cause model instability, where minor changes in input data lead to large fluctuations in estimated parameters.

Table 8: Test for Multicollinearity

Coefficients							
Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.484	.189		2.565	.011		
Coping Mechanism	.303	.044	.396	6.877	.000	.415	2.411
Dependency	.339	.063	.347	5.390	.000	.330	3.028
Prevalence of Pregnancy	.281	.070	.191	3.993	.000	.597	1.676

a. Dependent Variable: Compromised well-being of the caregiver

Source Research Data (2024)

The tolerance values for all variables (Coping Mechanism: .415, Dependency: .330, Prevalence of Pregnancy: .597) are well above the threshold of 0.1, indicating no issues with multicollinearity. The VIF values for all variables (Coping Mechanism: 2.411, Dependency: 3.028, Prevalence of Pregnancy: 1.676) are below the threshold of 10, suggesting that multicollinearity is not a concern in this model. Consequently, all variables were retained in the model, as there was no statistical justification for their removal based on multicollinearity concerns. Schreiber Gregory (2018) states that a tolerance value below 0.1 or a VIF above 10 indicates problematic multicollinearity. In this analysis, all variables demonstrated tolerance values above 0.1 and VIF values below 10, indicating no significant multicollinearity issues. Therefore, all variables were retained in the model, confirming the robustness and reliability of the regression analysis.

Test for Heteroscedasticity

The Breusch-Pagan Test was employed to assess the presence of heteroscedasticity in the multiple regression model between the dependent and independent variables. This test checks whether the variance of the residuals in the regression model depends on the values of the independent variables. As Halunga et al. (2017) noted, the test's null hypothesis assumes homoscedasticity, meaning constant variance of residuals.

Table 9: Test for Heteroscedasticity

ANOVA					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.481	3	.160	2.055	.107b
Residual	17.947	230	.078		
Total	18.428	233			

a Dependent Variable: residuals squared

b Predictors: (Constant), Prevalence of Pregnancy, Coping Mechanism, Dependency

Source Research Data (2024)

The model's explanatory power is represented by the regression sum of squares (0.481), while unexplained variation is captured by the residual sum of squares (17.947). The mean squares for regression (0.160) and residuals (0.078) are used to compute the F-statistic (2.055). This statistic compares the explained variance to the unexplained variance. A larger F-value would suggest more substantial evidence against uniform variance. The observed p-value (0.107) exceeds the 0.05 threshold, suggesting insufficient grounds to challenge the assumption of consistent variance. The Breusch-Pagan analysis yields a p-value of 0.107, surpassing the typical 0.05 significance benchmark. This outcome fails to provide grounds for rejecting the

premise of uniform residual variance. Consequently, we cannot conclude that the model exhibits significant heteroscedasticity. The findings support that residual variance remains stable across predictor levels, lending credence to the regression results' dependability and accuracy.

Karl Pearson Correlation

Karl Pearson Correlation analysis was used to assess relationships between variables. It tested the null hypothesis of no significant linear association between predictors (Coping Mechanism, Dependency, Prevalence of Pregnancy) and the outcome (Impact on Elderly). This method yields coefficients ranging from -1 to 1, indicating the strength and direction of relationships. Values near 1 or -1 suggest strong positive or negative correlations, respectively, while those close to 0 imply weak or no linear relationship. This technique helps uncover meaningful connections among the study's key variables, offering insights into their interdependencies.

Table 10: Pearson Correlation

Variables	Coping Mechanism	Dependency	Prevalence of Pregnancy	Impact on Elderly
Coping Mechanism	1			
Dependency	0.326*	1		
Prevalence of Pregnancy	0.274*	0.413**	1	
Compromised wellbeing	0.489**	0.401**	0.357**	1

Correlation is significant at the 0.05 level (2-tailed). Correlation is significant at the 0.01 level (2-tailed).

Source Research Data (2024)

Coping Mechanism shows a moderate positive correlation with Impact on Elderly ($r = 0.489, p < 0.01$), suggesting that effective coping mechanisms are significantly associated with a positive impact on elderly caregivers. Dependency is positively correlated with Impact on Elderly ($r = 0.401, p < 0.01$), indicating that higher dependency levels are associated with a more significant impact on elderly caregivers. Prevalence of Pregnancy positively correlates with Impact on Elderly ($r = 0.357, p < 0.01$), showing that higher prevalence rates are linked to a greater impact on elderly caregivers. Dependency and Prevalence of Pregnancy are moderately correlated ($r = 0.413, p < 0.01$), suggesting that these factors are interrelated in caregiving.

Multiple Regression Analysis

Multiple regression analysis was conducted to evaluate the combined effect of all independent variables (Coping Mechanism, Dependency, and Prevalence of Pregnancy) on the dependent variable (Impact on Elderly). This method allows us to assess the relative importance of each independent variable while controlling for the influence of the others, providing a comprehensive understanding of how these factors jointly affect the impact on elderly caregivers.

Hypothesis: H01: The combined effect of coping mechanisms, dependency, and prevalence of pregnancy has no significant influence on the impact on elderly caregivers.

Regression Model: The regression analysis reveals that all three independent variables—prevalence of Pregnancy, Dependency, and Coping Mechanism—significantly influence the impact on elderly caregivers. These variables are crucial in shaping how elderly caregivers are affected, indicating their importance in understanding caregiver burden and well-being.

The R-squared value of 0.684 confirms that approximately 68.4% of the variance in the impact on elderly caregivers can be explained by the combined effects of the three independent variables in the model. This high R-squared figure signifies the solid explanatory power of the regression model, confirming that the prevalence of pregnancy, dependency, and coping mechanisms collectively contribute meaningfully to

variations in the impact on elderly caregivers. The adjusted R-squared value of 0.680 further refines this estimate, accounting for the number of predictors in the model and ensuring that the R-squared value is not artificially high due to the inclusion of multiple variables.

As depicted in the ANOVA results, the F-statistic of 166.215, coupled with a significance level (p-value) of .000, indicates that the model is statistically significant overall. This suggests we can reject the null hypothesis, asserting that at least one of the independent variables significantly affects the impact on elderly caregivers.

In particular, when comparing the influences of the independent variables, the regression coefficients reveal that Dependency has the most substantial positive impact on elderly caregivers, followed closely by Coping Mechanism, with Prevalence of Pregnancy also contributing positively but to a lesser extent. This sequential ordering emphasizes the varying degrees of effectiveness among the factors influencing caregiver burden and well-being.

Table 11: Regression Model Summary

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.827 ^a	.684	.680	.44071	.684	166.215	3	230	.000
a. Predictors: (Constant), Coping Mechanism, Dependency, Prevalence of Pregnancy									
b. Dependent Variable: Compromised Elderly wellbeing									

Source Research Data (2024)

The R value of 0.827 indicates a strong positive correlation between the independent variables and the impact on elderly caregivers. The R-squared value of 0.684 suggests that approximately 68.4% of the variance in the impact on elderly caregivers is explained by the combined effects of the three factors. The adjusted R-squared of 0.680 provides a more accurate estimate, considering the number of predictors in the model. Model Coefficients: The coefficients for each predictor variable provide insightful details regarding the strength and direction of their impact on the compromised well-being of elderly caregivers. Dependency: The coefficient for Dependency is 0.339. This suggests that for every one-unit increase in Dependency, there is an expected increase of 0.339 units in the impact on elderly caregivers, holding other factors constant. This positive coefficient highlights the significant burden that dependency levels place on elderly caregivers.

Coping Mechanism: The coefficient associated with Coping Mechanisms is 0.303, indicating that a one-unit increase in effective coping mechanisms leads to an increase of 0.303 units in the impact on elderly caregivers. This significant positive impact underscores the importance of effective coping strategies in managing caregiver burden. Prevalence of Pregnancy: The coefficient for the Prevalence of Pregnancy is 0.281, suggesting that a one-unit increase in the prevalence of pregnancy correlates with a 0.281-unit rise in the compromised well-being of elderly caregivers. Although it shows a positive influence, this is the lowest among the three predictors, implying that while the prevalence of pregnancy is essential, its direct effect is less pronounced than the other variables studied.

The regression results indicate that all three independent variables—dependency, Coping Mechanism, and Prevalence of Pregnancy—positively influence the impact on elderly caregivers, with Dependency exhibiting the strongest impact. The findings illustrate the significance of these factors in understanding caregiver burden and well-being. For stakeholders in caregiving and health support, these insights can guide the allocation of resources and focus areas for enhancing support strategies to improve outcomes for elderly caregivers.

Table 12: Total Coefficients

Coefficients ^a											
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	
1	(Constant)	.484	.189		2.565	.011	.112	.856			
	Coping	.303	.044	.396	6.877	.000	.216	.390	.757	.413	.255
	Dependency	.339	.063	.347	5.390	.000	.215	.462	.772	.335	.200
	Prevalence	.281	.070	.191	3.993	.000	.142	.420	.610	.255	.148

a. Dependent Variable: Compromised Elderly wellbeing

Source: Research Data (2024)

The coefficient of 0.339 suggests that for each one-unit increase in Dependency, the compromised well-being of elderly caregivers is expected to increase by approximately 0.339 units, holding other factors constant. This is statistically significant ($p < .001$). Coping Mechanism: A coefficient of 0.303 indicates that an increase of one unit in coping mechanisms leads to an expected increase of 0.303 units in compromised well-being elderly caregivers, which is also statistically significant ($p < .001$). The coefficient of 0.281 implies that for every one-unit increase in the prevalence of pregnancy, the compromised well-being of elderly caregivers increases by approximately 0.281 units, with a significance level of $p < .001$. The ANOVA results indicate that the regression model significantly explains variations in the impact on elderly caregivers. This is shown by a very low significance value (p -value < 0.001), suggesting that at least one of the independent variables—Dependency, Coping Mechanism, or Prevalence of Pregnancy—substantially affects the compromised well-being of elderly caregivers.

Based on the ANOVA table, the total sum of squares for regression is significantly larger than the sum of squares for residuals, which implies that a notable percentage of the variance in the impact on elderly caregivers is attributable to the combined effects of the independent factors included in the model. The F-statistic calculated from the ANOVA results, measuring the overall significance of the model, is quite high. This high value suggests that the variation in the impact on elderly caregivers explained by the independent variables is significantly greater than the unexplained variation. Hence, this reinforces the strength of the relationship between dependency, coping mechanisms, the prevalence of pregnancy, and the compromised well-being of elderly caregivers. ANOVA analysis highlights these factors' significant role in influencing the impact on elderly caregivers. The results affirm that effective support practices are essential for enhancing caregiver well-being and guiding stakeholders toward strategic decisions that can improve the quality of life for elderly caregivers.

Table 13: Overall ANOVA

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	96.848	3	32.283	166.215	.000b
Residual	44.671	230	.194		
Total	141.519	233			

a. Dependent Variable: Elderly compromised health

b. Predictors: (Constant), Coping Mechanism, Dependency, Prevalence of Pregnancy

Source: Research Data (2024)

The F value of 166.215 with a significance level (p-value) of .000 indicates that the regression model is statistically significant. This means that the combined influence of Dependency, Coping Mechanisms, and pregnancy prevalence on the impact on elderly caregivers is substantial, leading to rejection of the null hypothesis.

DISCUSSION

The prevalence of elderly caregivers aged 56 and above, with 27% being 66 or older, presents significant concerns for both the caregivers and the children in their care. Caregiving in advanced age poses physical and mental health risks, especially when chronic health conditions are prevalent among the elderly (Heger, 2017; Luichies et al., 2019). Caring for young children, who require constant attention and active engagement, is physically demanding and may exacerbate existing health conditions in older adults. These demands can lead to compromised care quality and even safety risks for the children. The elderly are also more susceptible to stress-induced health complications, worsening their already fragile health and potentially leading to caregiver burnout, a phenomenon common in older caregiving populations.

Financial strain further complicates the situation, as many elderly caregivers are retired or nearing retirement. Living on fixed incomes or meager government stipends, such as the 2,000 KES per month in Kenya (approximately 20 USD), these caregivers struggle to provide for both their own needs and the needs of the children in their care (Oware, 2022; Katerere-Virima, 2023). The financial burden often forces them to seek supplemental income, placing them at risk of exploitation in the informal labor market. This situation is particularly concerning for caregivers over 55, who may already be grappling with age-related physical limitations. The economic pressure of caregiving exacerbates their vulnerability, highlighting the need for better financial and social support structures for this demographic.

Elderly caregivers often employ various coping mechanisms to manage the immense burden of caregiving. These include reliance on community-based support, informal income-generating activities, or drawing on extended family networks, though the latter is becoming less dependable. The generational gap between caregivers and children further complicates their ability to provide modern childcare, leading to challenges in addressing the children's developmental and educational needs (Marino et al., 2016). In this context, the lack of sufficient financial and emotional support from other family members adds strain, diverging from other cultures like rural Andean Colombia, where caregiving is more evenly distributed among relatives (Friedemann-Sánchez, 2012). This concentration of caregiving duties on the elderly may signal a weakening of traditional family support systems, overwhelmed by the socioeconomic realities of teenage parenthood.

Ultimately, the well-being of elderly caregivers is critically compromised by the lack of adequate support, both financially and socially. The overwhelming caregiving responsibilities, combined with limited resources and support structures, perpetuate cycles of poverty and strain the health of these elderly individuals. This underscores the need for policies that support not only teenage parents but also their elderly caregivers, ensuring the sustainability of caregiving arrangements while safeguarding the welfare of both generations. Though the Kenya government has a policy on taking teenage mothers back to school, sustainable solutions are essential to break the cycle of dependency and ensure that elderly caregivers are not left to shoulder these burdens alone, compromising their own health and well-being.

CONCLUSION AND RECOMMENDATIONS

Conclusions

The high prevalence of teenage pregnancy, along with the dependency on elderly caregivers and the coping mechanisms they employ, significantly affects the well-being of these caregivers. The data highlights the urgent need to address these interconnected challenges to alleviate the compromised well-being of elderly caregivers. Regression analysis indicates that dependency has the most substantial impact on caregivers' well-being, with higher levels of dependency exacerbating their physical, emotional, and financial strain. This underscores the importance of developing targeted support systems to manage dependency effectively, reducing the burden on elderly caregivers.

On the other hand, effective coping mechanisms can improve the well-being and resilience of elderly caregivers, helping them navigate the demanding responsibilities of caregiving. These mechanisms, such as community support or assistance from extended family, can mitigate the stress and strain associated with caregiving, promoting better health and emotional stability. While the prevalence of teenage pregnancy remains significant, its direct influence on caregivers' compromised well-being is less pronounced compared to the impact of dependency and coping mechanisms.

The compromised well-being of elderly caregivers is primarily driven by high dependency levels and insufficient coping mechanisms. To improve their well-being, comprehensive interventions that provide practical support in reducing dependency and enhancing coping strategies are critical. Addressing these issues holistically will help safeguard the health and resilience of elderly caregivers, ensuring that they can provide care without compromising their own well-being.

Recommendations

To manage the dependency burden on elderly caregivers effectively, programs and policies should prioritize providing direct support and resources. This includes developing training initiatives to improve caregivers' practical skills and resilience. Support groups should be established to offer peer support, as well as professional psychological counseling to address stress management. Workshops focused on coping strategies and emotional well-being can provide additional tools for caregivers.

Tackling the socio-cultural and economic factors contributing to high dependency rates requires community-based programs. These should focus on reducing poverty and improving access to healthcare for elderly caregivers and the families they support. Engaging local leaders and stakeholders can foster environments that reduce the reliance on elderly caregivers by building a stronger community support network. This approach can also alleviate the pressure on older family members by redistributing caregiving responsibilities more evenly.

Comprehensive sexual and reproductive health education should be provided in schools and communities to reduce teenage pregnancy rates. Programs supporting pregnant teenagers and young mothers are essential to prevent the long-term dependency on elderly caregivers. These programs must focus on reduction of child pregnancies, access to healthcare, education, and childcare services for young mothers to reduce the caregiving burden on elderly relatives. Everyone in the society needs to bear their part of the burden. A society that fails to protect its children from early parenthood must be ready to shoulder the responsibility for both their future and that of the next generation. If we don't guide and nurture them, we inherit not just their challenges but also the consequences of our own inaction.

DATA AVAILABILITY

The data collection process was conducted under the supervision of teachers and guardians. Please note that the data is confidential and not available for public dissemination since it involves minors.

REFERENCES

1. Ariyo, E., Mortelmans, D., & Wouters, E. (2019). The African child in kinship care: A systematic review. *Children and Youth Services Review*. <https://doi.org/10.1016/J.CHILDYOUTH.2018.12.013>.
2. Ayuandini, S., Habito, M., Ellis, S., Kennedy, E., Akiyama, M., Binder, G., ... & Hennegan, J. (2023). Contemporary pathways to adolescent pregnancy in Indonesia: A qualitative investigation with adolescent girls in West Java and Central Sulawesi. *PLOS global public health*, *3*(10), e0001700
3. Baddorf, M. (2017). Phenomenal consciousness, collective mentality, and collective moral responsibility. *Philosophical Studies*, *174*, 2769-2786. <https://doi.org/10.1007/S11098-016-0809-X>.
4. Burley, J., Samir, N., Price, A., Parker, A., Zhu, A., Eapen, V., Contreras-Suarez, D., Schreurs, N., Lawson, K., Lingam, R., Grace, R., Raman, S., Kemp, L., Bishop, R., Goldfeld, S., & Woolfenden, S. (2022). Connecting Healthcare with Income Maximisation Services: A Systematic Review on the

- Health, Wellbeing and Financial Impacts for Families with Young Children. *International Journal of Environmental Research and Public Health*, 19. <https://doi.org/10.3390/ijerph19116425>.
5. Cabral, C., & Brandão, E. (2020). Adolescent pregnancy, sexual initiation, and gender: perspectives in dispute. *Cadernos de saude publica*, 36 8, e00029420 . <https://doi.org/10.1590/0102-311x00029420>.
 6. Carr, D., & Utz, R. L. (2020). Families in later life: A decade in review. *Journal of Marriage and Family*, 82(1), 346-363.
 7. Chauhan, D. (2020). *Teen Pregnancy: Physical, Psychological and Social Aspects*.
 8. Dudley, E. (2021). Preventing Unplanned Pregnancies: The Impact of Prevention Education.
 9. Fischer, J., & Ravizza, M. (1998). *Responsibility and Control: A Theory of Moral Responsibility*. DOI: 10.1017/CBO9780511814594.
 10. Friedemann-Sánchez, G. (2012). Caregiving Patterns in Rural Andean Colombia. *Feminist Economics*, 18, 55 - 80. <https://doi.org/10.1080/13545701.2012.714471>.
 11. Goodreau, S. M., Pollock, E. D., Wang, L., Li, J., Aslam, M. V., Katz, D. A., ... & Rosenberg, E. S. (2022). Declines in Pregnancies among US Adolescents from 2007 to 2017: Behavioral Contributors to the Trend. *Journal of pediatric and adolescent gynecology*, 35(6), 676-684.
 12. Halunga, A., Orme, C., & Yamagata, T. (2017). A heteroskedasticity robust Breusch–Pagan test for Contemporaneous correlation in dynamic panel data models. *Journal of Econometrics*, 198, 209-230. <https://doi.org/10.1016/J.JECONOM.2016.12.005>.
 13. Harding, J. F., Zief, S., Farb, A., & Margolis, A. (2020). Supporting expectant and parenting teens: New evidence form future programming and research. *Maternal and Child Health Journal*, 24(Suppl 2), 67-75.
 14. Harrington, E. K., Casmir, E., Kithao, P., Kinuthia, J., John-Stewart, G., Drake, A. L., Unger, J. A., Ngure, K. (2021). “Spoiled” girls: Understanding social influences on adolescent contraceptive decision-making in Kenya. *PLOS ONE*, 16(8), e0255954. DOI: 10.1371/journal.pone.0255954.
 15. Hassan, S. H., Yeap, J. A., & Al-Kumaim, N. H. (2022). Sustainable fashion consumption: advocating philanthropic and economic motives in clothing disposal behaviour. *Sustainability*, 14(3), 1875.
 16. Heger, D. (2017). The Mental Health of Children Providing Care to their Elderly Parent. *Health Economics*, 26, 1617–1629. <https://doi.org/10.1002/hec.3457>.
 17. Hossan, D., Dato’Mansor, Z., & Jaharuddin, N. S. (2023). Research population and sampling in quantitative study. *International Journal of Business and Technopreneurship (IJBT)*, 13(3), 209-222.
 18. Hovdestad, W., Shields, M., Williams, G., & Tonmyr, L. (2015). Vulnerability within families headed by teen and young adult mothers investigated by child welfare services in Canada. *Health promotion and chronic disease prevention in Canada : research, policy and practice*, 35 8-9, 143-50 . <https://doi.org/10.24095/HPCDP.35.8/9.06>.
 19. Jika, B. M., Khan, H. T., & Lawal, M. (2021). Exploring experiences of family caregivers for older adults with chronic illness: a scoping review. *Geriatric Nursing*, 42(6), 1525-1532.
 20. Kakar, Z. U. H., Rasheed, R., Rashid, A., & Akhter, S. (2023). Criteria for assessing and ensuring the trustworthiness in qualitative research.
 21. Karaçam, Z., Çakaloz, D., & Demir, R. (2021). The impact of adolescent pregnancy on maternal and infant health in Turkey: Systematic review and meta-analysis. *Journal of gynecology obstetrics and human reproduction*, 102093 . <https://doi.org/10.1016/j.jogoh.2021.102093>.
 22. Katerere-Virima, T. (2023). *Moving Beyond ‘A white Man’s Thing’: A Case Study of Urban Kenyan Youth Mental Health*(Doctoral dissertation).
 23. Khan, H. T., Addo, K. M., & Findlay, H. (2024). Public Health Challenges and Responses to the Growing Ageing Populations. *Public Health Challenges*, 3(3), e213.
 24. Legawati, L., Achadi, S., & Nugraheni, S. (2019). Social, cultural and health determinants and risk factors in adolescent pregnancy in poor and developing countries. *Journal of Reproductive Health and Sexual Science*, 1(1). DOI: 10.33486/JRPHS.VIII.13.
 25. Liang, M., Simelane, S., Fillo, G. F., Chalasani, S., Weny, K., Canelos, P. S., ... & Snow, R. (2019). The state of adolescent sexual and reproductive health. *Journal of Adolescent Health*, 65(6), S3-S15.

26. Luichies, I., Goossensen, A., & Meide, H. (2019). Caregiving for ageing parents: A literature review on the experience of adult children. *Nursing Ethics*, 28, 844 - 863. <https://doi.org/10.1177/0969733019881713>.
27. Malunga, G., Sangong, S., Saah, F. I., & Bain, L. E. (2023). Prevalence and factors associated with adolescent pregnancies in Zambia: a systematic review from 2000–2022. *Archives of Public Health*, 81(1), 27.
28. Marino, J. L., Lewis, L. N., Bateson, D., et al. (2016). Teenage Mothers. *Australian Family Physician*, 45(10). Retrieved September 11, 2018, from <https://search.informit.com.au/documentSummary;dn=376943452778983;res=IELHEA>
29. Masaba, B. B., Mmusi-Phetoe, R., Odhiambo, J. A., Bernard, R. O. N. O., Kabo, J. W., Moraa, D., ... & Ojiambo, S. L. (2022). Drivers of early marriage and teenage pregnancy in Kenya and Uganda during COVID-19 lockdown period: A systematic review. *Journal of Integrative Nursing*, 4(4), 202-210.
30. Meyer, S., Mandl, S., Gesmann-Nuissl, D., & Strobel, A. (2023). Responsibility in Hybrid Societies: concepts and terms. *AI and Ethics*, 3(1), 25-48.
31. Mkutu, K., & Mkutu, T. R. (2019). Public health problems associated with “boda boda” motorcycle taxis in Kenya: the sting of inequality. *Aggression and violent behavior*, 47, 245-252.
32. Mutua, M. N., Miriti, J. M., & Mogeni, S. (2019). Implementation of the ‘return to school’ policy for teenage mothers in Kenya: A rights-based perspective. *Int J Humanit Soc Sci Educ*, 6(6), 58-74.
33. Mwenje, W. J. (2015). Implementation of Re-Entry Policy for adolescent mothers in public secondary schools: A case of Nakuru County, Kenya. *International Academic Journal of Education*, 1(6), 1-15.
34. NHRC, UNICEF. (2024). Behavioural determinants of child marriage and adolescent pregnancy in Nepal: A qualitative study.
35. Nomaguchi, K., & Milkie, M. A. (2020). Parenthood and well-being: A decade in review. *Journal of Marriage and Family*, 82(1), 198-223.
36. Nomaguchi, K., & Milkie, M. A. (2020). Parenthood and well-being: A decade in review. *Journal of Marriage and Family*, 82(1), 198-223.
37. Omwancha, K. M. (2012). *The Implementation of an Educational Re-entry Policy for Girls After Teenage Pregnancy: A Case Study of Public Secondary Schools in the Kuria District, Kenya: a Thesis Submitted to the Victoria University of Wellington in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in Education* (Doctoral dissertation, Victoria University of Wellington).
38. Oware, P. M. (2022). The potential for complementarity between formal and informal social protection programmes in Kenya: A case study.
39. Panday, S., Makiwane, M., Ranchod, C., & Letsoala, T. (2009). Teenage pregnancy in South Africa: with a specific focus on school-going learners.
40. Rausch, T. M., & Kopplin, C. S. (2021). Bridge the gap: Consumers’ purchase intention and behavior regarding sustainable clothing. *Journal of Cleaner Production*, 278, 123882.
41. Roy, A., Newman, A., Round, H., & Bhattacharya, S. (2024). Ethical Culture in Organizations: A Review and Agenda for Future Research. *Business Ethics Quarterly*, 34(1), 97–138. doi:10.1017/beq.2022.44
42. Saricam, C., & Okur, N. (2019). Analysing the consumer behavior regarding sustainable fashion using theory of planned behavior. *Consumer behaviour and sustainable fashion consumption*, 1-37.
43. Sedgwick, S. (2006). Hegel's Critique of Kant: An Overview. *A Companion to Kant*, 473-485.
44. Sripada, C. (2016). Self-expression: a deep self-theory of moral responsibility. *Philosophical Studies*, 173, 1203-1232. DOI: 10.1007/s11098-015-0527-9.
45. Tabei, K., Cuisia-Cruz, E. S. S., Smith, C., & Seposo, X. (2021, December). Association between teenage pregnancy and family factors: an analysis of the Philippine National Demographic and Health Survey 2017. *Healthcare*, 9(12), 1720. MDPI. Retrieved from <https://www.mdpi.com/2227-9032/9/12/1720>

46. Taherdoost, H. (2022). What are different research approaches? Comprehensive Review of Qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5(1), 53-63.
47. Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.
48. Tridenti, G., & Vezzani, C. (2017). Pregnancy in Adolescence. In DOI: 10.1007/978-3-319-57162-1_15.
49. Wittenberg, J., Flaherty, L., Becker, D., Harper, G., Crookall, J., & Vianna, N. (2022). Stigma as a Source of Stress for Adolescent Mothers and Their Babies.. *The Journal of nervous and mental disease*, 210 9, 650-654 . <https://doi.org/10.1097/NMD.0000000000001545>.