

Influence of Resilience on Interpersonal Functioning among Orphaned Adolescent Students in Public Secondary Schools in Kenya

***William Agure Otaro, Judith Anyango Owaa, Pamela Adhiambo Raburu**

Jaramogi Oginga Odinga University of Science and Technology

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ABSTRACT

The purpose of the study was to determine the relationship between resilience and interpersonal functioning among orphaned adolescent students in public secondary schools in Nyatike Sub - County, Kenya. The study was informed by self-efficacy theory adopted from Bandura's Social Cognitive Theory, and Resilience theory. The study adopted Concurrent Triangulation design within Mixed Methods approach. The target population consisted of 1703 students, 17 teachers and 3 Focus Group Discussions from 57 public secondary schools in Nyatike Sub- County of Kenya. A sample size of 458 students, 17 teachers and 12 participants for Focus Group Discussions were obtained using stratified random sampling and purposive sampling techniques respectively. Reliability of instruments was determined through pilot study with 42 participants. Content and face validity of the instruments was ascertained by pilot testing of the questionnaire and also by seeking expert opinion of university lecturers experienced in formulation of research tools. Data was collected by use of questionnaires, in-depth interviews and Focus Group Discussions. Quantitative data was analyzed using descriptive and inferential statistics while qualitative data was analyzed thematically. The study findings revealed that there was moderate positive ($r=0.159$, $p=0.01$) correlation between resilience and interpersonal functioning. Major themes that emerged from qualitative data included strategies for adjustments to loss and grief, community and environmental support, and aspiration for better life. The study concluded that there was need for provision of functional social support systems to help orphan and vulnerable adolescent students to psychologically adjust in their new situation.

Key words: Resilience, interpersonal functioning, Orphaned adolescent, secondary school

INTRODUCTION

Orphans are susceptible to long term psychological problems as a result of their inability to deal with their parental loss. Irrespective of the risk factors, some orphans can cope better in adverse situations than others. Resilience is the ability to cope with hardship and other stressful and adverse situations, and one's capability to overcome psychological problems in such situations (Rutter,1985). Adolescence is a pivotal period of psychological development characterized by increasing autonomy, identity formation, and evolving social dynamics. For orphaned adolescent students, the absence of parental figures and consistent caregiving environments may introduce unique psychosocial challenges that impact interpersonal functioning. Interpersonal functioning of adolescents, encompassing their ability to initiate, sustain, and navigate social relationships, which plays a critical role in emotional regulation and psychological well-being. The study sought to incorporate the perspective of positive psychology, which focuses on factors that enable orphaned adolescents to thrive and grow despite the presence of stressful events.

Gomez- Esquivel, Rodriguiz and Ortizi-Rodriguiz (2020) study in Mexico analyzed levels of resilience among institutional orphans. The study adopted analytical transversal method. The Asylum Anomie and Nominal Resilience Inventory (IAAR) was used to collect data from a sample of 29 participants. The findings revealed that 58.6% showed presence of resilience. The study used a very lean sample that is unrepresentative and makes

findings ungeneralizable to a larger population. The study also questionnaires only to collect data and the findings relied only on numerical data. The present study sought to bridge this gap by employing a larger sample and mixed methods approach which utilizes both quantitative and qualitative approaches to collect and analyze data.

Lai, Zhou, Xu, Li, Yang, Tang, Zhang, Jiang and Liu (2022) study in China examined how resilience affects subjective well-being of AIDS orphans. The study adopted cross-sectional survey design and a sample of 571 orphans and 979 non-orphan students were recruited for the study. Questionnaires and interviews were used to identify direct and indirect effects of internal (resilience) and external (school connectedness and peer support) on subjective well-being. The study finding revealed that effects of school connectedness and peer support on subjective well-being were mediated by resilience. The study was conducted in China whose cultural context and sample characteristics may not apply to Kenyan context.

Mishra (2020) in India examined resilience and self-esteem levels if teenage orphans. The study used questionnaires to collect data from 40 participants (20 orphans and 20 non-orphans). The findings showed that orphans exhibited greater resilience than non-orphans due to friendship and close social ties with peers. The study-based findings on quantitative data only. The study sample was also too small to warrant generalization of findings to a larger population. The present study used mixed methods with a larger sample to make the findings representative of the target population.

In contrast, Duggal and Wadhawan (2020) study in India compared orphan and non-orphans in dimension of resilience and revealed that orphans were less resilient. The study sampled 60 (30 orphans and 30 non-orphans) participants drawn from secondary schools using non-probability purposive sampling technique. Data were collected using questionnaires and were analyzed using descriptive statistics. The study used non-probability sampling technique which limits the choice of participants. The present study used stratified random sampling technique to give every orphan child in the sampled schools opportunity to participate in the study.

Poya, Esmaeili and Naghavi (2023) study in Afghanistan investigated adolescents' growth after loss of their fathers. The study adopted phenomenological research design and collected data from 14 orphaned adolescents. Data was collected using semi-structured interviews and were analyzed thematically. The study reported that orphaned adolescents were able to achieve post-traumatic growth over time. The study also found that social support, psychological and cognitive factors, and spiritual well-being were important factors in enhancing resilience, stronger relationships, greater empathy and compassion, and personal growth and independence.

Putri, Mansoer and Nesi (2023) study in Indonesia determined the function of resilience as a predictor of adolescent happiness. The study adopted correlational research design with a sample of 403 participants selected using convenience sampling technique. Questionnaires were used to collect data and were analyzed using descriptive statistics. The study findings revealed that resilience was a predictor of happiness among orphans, accounting for 21.2% of variance. The study used quantitative data only in which participants were required to respond to pre-determined responses only. The present study used other primary sources of data collection such as interviews and focus group discussions to elicit richer information about orphaned adolescents' happiness. The use of convenience sampling has low external validity and findings may not be generalized to wider population since the sample may not capture diverse backgrounds, characteristics or opinions of participants.

Noor, Gul, Dill and Gulab (2024) study in Pakistan explored self-esteem and resilience among orphans using cross-sectional research design. The study sample consisted of 300 participants who provided data through Brief Resilience Scale (Smith et al, 2008). Study finding revealed statistically positive significant correlation between resilience and self-esteem. Reduced self -esteem and lower levels of resilience was revealed in orphans compared to non-orphans. The study used quantitative data only while the present study used mixed methods approach to data collection so that quantitative findings were corroborated by qualitative findings.

Simbeni and Mokgatle (2025) study in South Africa explored protective behaviours of maternal

adolescent orphans. The study adopted qualitative exploratory research design and recruited 14 participants determined by purposive sampling technique. Data was collected using interviews and were analyzed thematically. Results showed that some orphaned adolescents possess protective behaviours and adopt coping mechanisms such as which contribute to their resilience: hopefulness, positive self-concept, actively seeking support for their physical and psychological needs, engaging in constructive tasks and fostering supportive relationships. The study used data from a small sample obtained through purposive sampling technique which has potential bias in selection of participants. The present study sought to bridge this gap by using mixed methods approach and a larger sample of participants.

Tebikew and Bitew (2025) study in Ethiopia assessed the differences in resilience status between orphan and non-orphan students in public elementary schools. The sample consisted of 310 selected using proportional stratified random sampling method. Questionnaires were used to collect data and were analyzed using descriptive and inferential statistics. Results revealed significantly higher levels of resilience among double orphans than both single and non-orphans. The study was conducted with a sample of elementary school students whose age mean 12.5 not late adolescents (age mean= 18.08, SD=0.98) as in the present study.

Ogutha (2022) study in Kenya examined the relationship between resilience and academic achievement among orphaned adolescents in secondary schools. The study adopted ex-post facto and descriptive strategies with a sample of 282 drawn using simple random sampling technique. Data were collected using questionnaires and analyzed using descriptive statistics. The study's finding revealed positive correlation between resilience and academic success. However, the findings were based on quantitative data only. The present study gained insight into participants' feelings and opinions through the use of mixed methods.

The present study explores the influence of resilience on interpersonal functioning among orphaned adolescents; with the aim of elucidating how perceived personal competence may influence social engagement and relational outcomes within this vulnerable population.

2.1 Theoretical Framework

The study was informed by Self – Efficacy theory adopted from Bandura's Social Cognitive Theory and Resilience theory. Self – efficacy theory (Bandura, 1997), posits that individuals' beliefs in their capability to execute specific tasks significantly influence their motivation, behaviour, and psychological well – being. Resilience is viewed as a universal human capacity that enables a person, group or community to deal with adversities by preventing, minimizing, overcoming, and even being transformed by these adversities (Rutter,1987). Resilience is thought of as a 'positive adaptation' after stressful or adverse situation, and focus attention on positive contextual, social and developmental trajectories from risk to problem-solving behaviours, mental distress and poor health outcomes. Orphaned adolescent students are faced with many challenges, especially presently that the family fabric and kinship bond that existed in extended families have been seriously eroded. This study explores how variations in resilience among orphaned adolescents may relate to their ability to form and maintain healthy social relationships, offering insights into the psychological mechanisms that support or hinder social development in orphaned adolescent students.

RESEARCH METHODOLOGY

3.1 Research Design

The present study employed Concurrent Triangulation Design within Mixed Methods Approach. Quantitative approach used in the research was based on variables that were measured through numbers and were analyzed by using procedures of statistical functioning (Creswell, 2018). Quantitative approach allows a clear collection of data and interpretation of data in the context of the study and easy understanding of findings (Stake, 2010). Qualitative approach was used to collect data and were analyzed thematically.

3.2 Participants

The target population for the study consisted of 1703 orphaned and vulnerable form 3 students, 68 class teachers and 61 Heads of Departments of Guidance and Counselling in 57 public secondary schools in Nyatike Sub – County of Kenya. Cluster sampling was used to sample schools into administrative divisions so as to achieve fair representation of respondents from all the regions of the Sub – County. A sample size of 511 orphaned adolescents was selected using proportionate and stratified random sampling technique, while purposive sampling technique was used to select 8 class teachers and 9 Heads of Guidance and Counselling departments were drawn from 17 sampled secondary schools. The sample size was deemed appropriate because it formed 30% of the target population as suggested by Rahman (2023); Bujang, Omar, Foo and Hon (2024). Thus, 511 was an adequate sample and its information can be generalized to a general population. A sample of 12 orphaned and vulnerable students were selected from the sampled schools for Focus Group Discussions, and 17 teachers were selected using purposive sampling technique for in-depth interviews. Purposive sampling was suitable for the present study because it is primarily used in qualitative studies in which selecting units (individuals, groups of individuals, institutions) based on specific purposes associated with answering research questions (Campbell, Greenwood, Priori, Shearer, Walkkem, Young, Bywaters and Walker, 2020).

3.3 Research Instruments

A validated 24-itemized resilience questionnaire for students was used to collect quantitative data from orphaned and vulnerable adolescent students. Data on interpersonal functioning was collected using a validated 24-itemized questionnaire designed to collect data regarding interpersonal traits. The responses were designed on 5-point likert scale: Strongly Agree (SA), Agree (A), Undecided (U), Disagree(D), Strongly Disagree (SD). In-depth interviews schedules were used to obtain detailed information from class teachers and heads of department of Guidance and Counselling in the sampled schools. Additional qualitative data was provided by Focus Group Discussions guides. To determine the suitability of the instrument, the researcher adopted expert opinion of lecturers of Jaramogi Oginga Odinga University of Science and Technology from department of Educational Psychology for verification and feedback during seminar presentations.

3.4. Data Collection Procedures

Data collection procedure began after proposal was accepted and approved by the university supervisors. An introductory letter was obtained from the Board of Postgraduate Studies of Jaramogi Oginga Odinga University of Science and Technology. Permission was sought from the National Commission for Science Technology and Innovation which allowed the researcher to proceed to the field to collect data. Ethical considerations that included voluntary participation, privacy of possible and actual participants, consent and confidentiality of data were adhered to. Questionnaires were issued to the students while interviews were held with teachers and Focus Group Discussions to collect qualitative data because it enabled researcher to understand and interpret feelings and opinions based on experiences of participants, and the responses were tape recorded for analysis. Quantitative data was collected from 458 using questionnaires while qualitative data was collected from 17 teachers and Focus Group Discussions was held with 12 orphaned adolescent participants.

FINDINGS AND DISCUSSION

The study sought to determine the relationship between resilience and interpersonal functioning among orphaned adolescent students in public secondary schools in Nyatike Sub-County, Kenya. Four dimensions of resilience: cognitive, social, physical and emotional regulation were investigated. The study employed quantitative data which were collected through questionnaires and qualitative data were collected through interviews and focus group discussions.

Cognitive dimension consisted of 7 – item questionnaire based on five-point likert scale. The result showed that the degree of influence of cognitive construct was average (mean average score = 3.11) as indicated

by most by respondents, with all indicators rated high (mean ranging between 2.21 and 3.65). The result indicates moderate endorsement of cognitive resilience factors among orphaned adolescent students.

Table 1. Resilience dimensions

Type of Orphanhood	N	Cognitive	Social	Physical	Emotional
Maternal	86	3.80,0.87±0.19	3.90,1.40±0.23	3.65,1.45±0.15	3.82,1.27±0.13
Paternal	232	4.22,0.57±0.59	4.28,0.69±0.09	4.18,1.00±0.07	4.10,0.93±0.27
Double	140	4.19,0.56±0.10	4.30,0.68±0.17	4.37,0.84±0.07	4.16, 1.10±0.09
Total	458	4.13,0.65±0.06	4.21,0.78±0.08	4.13,1.09±0.05	4.10,1.06±0.50
Statistics		F(2,456)=3.609	F(2,456)=2.107	F(2,456)=6.367	F(2,456)=1.749
p-value		0.031	0.127	0.002	.179

The values are expressed as mean ±standard error

Results in Table 1 suggests that while respondents demonstrate some cognitive strategies such as positive thinking, adaptability or goal-focused thinking, they are not yet strongly developed or consistently applied. The finding is consistent with that by Pavani and Bilquis (2024) study in India that asserted that orphaned adolescents were cognitively capable of abstract thinking, problem -solving and decision-making. However, contrary results were presented by Anbar (2023) study in Egypt that reported that orphans suffered anxiety and depression which aggravated educational challenges and lowered their self-esteem. Duggal and Wadhawan (2020) study in India too asserted that orphans are lower in dimensions of sense of mastery compared to non-orphans. Analysis of variance results indicate there was statistically significant difference in the scores $F(2, 456) = 3.609$, $p=0.031$) of cognitive of the three categories of orphaned adolescents.

Qualitative findings from FGD showed that orphaned adolescents were capable of comprehending school subjects. This was noted in the remark, *'My favourite subjects are those that my classmates find difficult'* [OA4]. Another student also said, *'I find it easier to understand it in class'* [OA1]. The sentiments of OA4 reflect a strong academic self – concept and intrinsic motivation in the orphaned adolescent. The views of OA1 suggest the student's ability to grasp concepts effectively in the classroom setting, pointing to a good cognitive engagement and possible learning and attentional skills. Both quotes together illustrate how adolescents perceive themselves as capable and academically resilient, despite adversities associated with orphanhood. This line of thinking may serve as a protective cognitive mechanism, enabling the orphaned adolescent to maintain a sense of self-efficacy and achievement in the face of external challenges. It also highlights the importance of educational environments in supporting resilience through structured learning and teacher-student interaction.

Additional qualitative findings from FGD revealed that orphans display good problem-solving skills and ability to plan, think creatively and reflectively. This was noted in the remark, *'I set my time to do school assignment ...I give priority to my tasks to ensure all of them are done'*[OA11]. The views of OA11 imply that orphan and vulnerable children are able to plan their day and carry out tasks to accomplishment. This result is supported by Awino and Abuya (2023) study in Kenya observed that orphans were able to plan their and execute proper use of limited resources. Haider, Shafiq and Ijaz (2020) study in Pakistan also reported that orphans were

more resilient than non-orphans. However, Mosha and Christopher (2021) study in Tanzania found that orphans were suffering stigma, discrimination, bullying and physical punishment that negatively impacted their well-being.

Contribution of social dimension to resilience was assessed using 5-itemized questionnaire based on five-point likert scale. The result showed that the degree of influence of social support was average (mean average score = 3.26) as indicated by most respondents with all indicators rated high (mean ranging between 3.01 and 3.59). The result indicates participants exhibited a moderately positive perception of social support and connectedness. The result suggests that while respondents recognize the role of social relationships in fostering resilience, their sense of social connection or reliance on support networks may not be particularly strong or consistent.

The result on social dimension revealed no statistically significant differences based on orphanhood type, indicating that whether the adolescent had lost one or both parents, did not significantly influence their reported social resilience levels. This result suggest that social dimension of resilience may be shaped by contextual, social, individual psychological factors other than specific functioning of parental loss. The result was supported by Baby et al (2022) study in India that found that life skill training significantly increased the self- confidence among orphans. However, Dilawar et al (2024) reported that double orphans were lower on psychological well-being compared to half orphans.

Analysis of variances results indicate there was no statistically significant difference between social resilience across all the three groups $F(2,456)=2.107$, $p=0.127$. Although minor variations in mean scores were observed, the differences were not large enough to reach statistical significance. This suggests that the type of parental loss does not have a significant effect on the resilience of level of orphaned adolescents in the study.

Qualitative findings from FGD showed self-awareness as a strong component of resilience. This was seen in the remark, *'When even those who have parents find difficulty even here in school, it encourages me not to give up in life.'* [OA3]. The sentiments of OA3 imply that orphaned adolescents are courageous and able to face truth about themselves. The findings were supported by Mhongera and Lombard (2020) study in South Africa that found that despite challenges, orphan and vulnerable children have developed pathways which help them to produce better outcomes. Cho, Ryberg, Hwang, Pearce and Iritani (2020) study in Kenya concurs that social support has positive impact on educational outcomes such as increased school attendance and drop out among orphan and vulnerable children. However, Vedasto, Charles and Sarwatt (2023) study in Tanzania argues that lack of educational support and health care services, bullying and segregation impacted educational outcomes of orphaned adolescents.

Further qualitative findings from FGD showed that sibling support played a positive role in enhancing resilience among orphans. This support helped them to solve problems that they encounter in their lives. This was noted in the remark, *'I talk to my sister because I don't trust other people. Some people just listen to your problems then they go to discuss with their pother friends'* [OA4].

The views of OA4 imply selective trust and guarded interpersonal approach, likely shaped by past experiences of betrayal, gossip or emotional vulnerability. The decision to confide only in a sibling reflect a protective mechanism which limits emotional exposure to perceived safe relationships in order to avoid further psychological harm. While the adolescent demonstrates a capacity for emotional expression and help-seeking, the confinement to a trusted familial member suggests both strength and limitation in their social resilience. On one hand, close bond with sibling serves as a crucial support system, and contributes to positive emotional well-being. On the other hand, lack of trust in peers may show social withdrawal, isolation, of difficulty in forming broader support networks which can limit the adolescents' access to additional resources and community based-emotional support. Hamsa and Hussein (2023) study in Iraq reported that orphaned adolescents suffer psychological needs and distress aggravated by lack of financial support to meet social needs. Yendork (2020) in Ghana found that older orphans had lower social support compared to younger ones. Nabrawi (2023) study in

Saudi Arabia also agrees that old orphans were more susceptible to challenges of self-esteem and self-actualization.

Qualitative findings revealed there was strong sibling support among orphaned adolescents. This was noted in the remark, *'The hardship we experience has made us to bond well with my brother. We are there for each other.'* [OA12]. The views of OA12 highlights a positive adaptive response to adversity, illustrating that shared hardship can foster stronger familial bonds. It suggests that in absence of parental figures, siblings may develop heightened sense of mutual responsibility and companionship. This finding is consistent with that by Soyobi et al. (2024) study in Nigeria that most orphans showed resilience through positive self-esteem and peer relationships. However, Boadu et al (2020) study in Ghana found that most orphans experienced stigma and feelings of deprivation and rejection which affected their confidence and relationships.

Contribution of physical dimension to resilience was assessed using six-itemized questionnaire based on five - point likert scale. The result showed that the degree of influence of physical dimension was high (mean average score = 3.52) as indicated by most of the respondents, with all indicators rated moderately high (mean ranging between 2.79 and 3.88). The result indicates a moderately high level of perceived physical resilience among participants. The score suggest that respondents generally agree, though not strongly, with statements related to physical aspects of resilience such as feeling physically strong, having enough sleep or exercise and having energy to cope with stress of daily challenges.

The mean average score ($M= 4.13$, $SD=1.09$) suggests a moderately high level of physical resilience among participants. The score reflects a general agreement that respondents feel physically able to cope with challenges. This may indicate adequate health, energy and physical self-care practices. The result also suggests there is potential to further strengthen physical resilience through improved health behaviours and access to supportive resources. This result is supported by Sandhiya and Maya (2021) in India that reported that orphaned children had significantly higher degree of resilience compared to non-orphans. Mishra (2020) in India also found orphans to have higher resilience than non-orphans. However, Wambui et al (2023) in Kenya found that high depression levels in orphans impacted on their resilience.

Analysis of variance results indicate statistically significant difference among the three groups $F(2,456)=6.367$, $p=.002$). This suggests that physical interactions or group membership plays a meaningful role in shaping interpersonal functioning among orphaned adolescents.

Qualitative findings also showed that orphaned adolescents engage in physically demanding labour which requires strength and endurance in order to get food and other school needs. This was noted in the remark, *'I join some fiends in mining over weekend to get some for food and other school needs'* [OA8]. The views of OA8 illustrates a form of survival-driven resilience in which the adolescent takes on a physically demanding work to meet essential needs like food and school expenses such as books and pens. Engaging in mining over the weekend reflects a significant level of physical resilience since it requires stamina, strength, and tolerance of harsh conditions. The finding also reveals economic vulnerability that orphan adolescents face. Despite the hardship, the adolescent demonstrates agency, initiative, and commitment to education, as the motivation for working is tied directly to school needs. This underscores a long-term orientation and goal-directed behaviour. On the other hand, it raises concerns about child labour, safety risks, and the potential trade-offs between work and study time. This tension between resilience and risk demonstrates the complex realities faced by children in disadvantaged contexts. The result is consistent with Makame et al (2020) study in Tanzania assertion that orphaned students dropped out due to hunger. Thobejane and Lorraine (2022) study in South Africa also reported that orphans suffered starvation, social support and poor medical care. Mwinzi et al (2020) study in Kenya also found that caretakers required orphans to engage in menial jobs in order to earn them money for personal and family needs.

Contribution of emotional dimension to resilience was assessed using 5-itemized questionnaire based on five - point likert scale. The result shows the degree of influence was below average (mean average score =2.62) as indicated by most respondents, with all indicators rated below average (mean ranging between 2.31 and 2.96).

The result shows that on the average, respondents tend to disagree or remain neutral regarding positive emotional statements. This may reflect emotional vulnerability, insecurity and lack of emotional well-being.

The result yielded overall mean score ($M=4.10$, $SD=1.06$) for emotional dimension. The result implies that maternal orphans tended to have lower outcomes compared to paternal or double orphans. The relatively low score for maternal orphans suggests that these orphans may experience diminished emotional well-being, possibly characterized by feeling of loneliness, emotional insecurity or limited access to supportive relationships. The result concurs with the findings by Boadu, Osei-Tutu and Osafo (2021) study in Ghana reported that orphans experienced loneliness, deprivation, entrapment and helplessness which affected their emotional balance. Similar findings were presented by Tang and Ann (2023) study in India which found prevalence of heightened psychological distress among orphaned adolescents. However, Singaravelu (2021) study in India found no significant difference between emotional intelligence between orphans and non-orphans.

Analysis of variance result indicated no statistically significant difference in mean scores for the three groups $F(2,456) = 1.749$, $p=0.179$). The absence of significant statistical difference indicates orphaned adolescents share similar challenges regardless of the subgroup. The result suggests that other variables such as socioeconomic status, trauma history or peer support might play a role in shaping outcomes of orphaned adolescents.

Qualitative findings showed that emotional instability was not uncommon among orphaned adolescents but their hope hang in belief in spiritual intervention. This was noted in the remark, *'Sometimes one feels really low emotionally when you remember your parents. But you just hold your emotions and say God is there.'* [OA3]. The views of OA3 indicate that orphans experience emotional swings but spirituality and future expectation keep them optimistic for a changed future. This result is in agreement with the findings by Qamar, Ghani, Kousar, Aslam, Sabah, Kousar and Shabbir (2022) study in Pakistan revealed that orphans were experiencing emotional instability as 34.9% respondents fell in abnormal category while 22.9% were in the borderline zone. Sufwan and Gupta (2023) study in India reported 26.6% of respondents were in borderline spectrum of emotional problem scale compared to only 105 of non-orphans. However, orphans remained optimistic about their future. This finding was resonated by Lawrence, Makhonza and Mngomezulu (2021) study in South Africa which found that spirituality and future expectation were strong sources of emotional resilience among orphaned adolescents.

Table 2. Correlation between Resilience and Interpersonal Functioning

Factors	Statistics	Resilience	Interpersonal Functioning
Resilience	Pearson Correlation	1	0.159
	Sig. (2-tailed)		0.01
	N	458	458
Interpersonal functioning	Pearson Correlation	0.159	1
	Sig. (2-tailed)	0.101	
	N	458	458

* Significant at 0.05 (95% confidence interval)

A Pearson correlation analysis revealed a weak but statistically significant positive ($r=0.159$, $p=0.01$) correlation between resilience and interpersonal functioning among orphaned adolescent students. This finding indicates that as one variable increases, the other tends to increase slightly. This suggests that higher levels of resilience is associated with better interpersonal skills, highlighting the potential value of resilience - building interventions in supporting social functioning within this population. The result also suggests that fostering resilience may have some positive effect on interpersonal functioning. The null hypothesis that there was no statistically significant influence of resilience on interpersonal functioning was rejected since it was established that there was statistically significant relationship between resilience and interpersonal functioning among orphaned adolescents. The finding concurs with that by Priyadarshini et al (2021) study in India which found that orphans have higher degree of resilience in bid to overcome challenges. Mishra (2020) study in India also showed that orphans exhibited greater resilience due to friendship and close social ties with peers.

The study also used scatter plot to verify the finding that resilience has a positive relationship with interpersonal functioning.

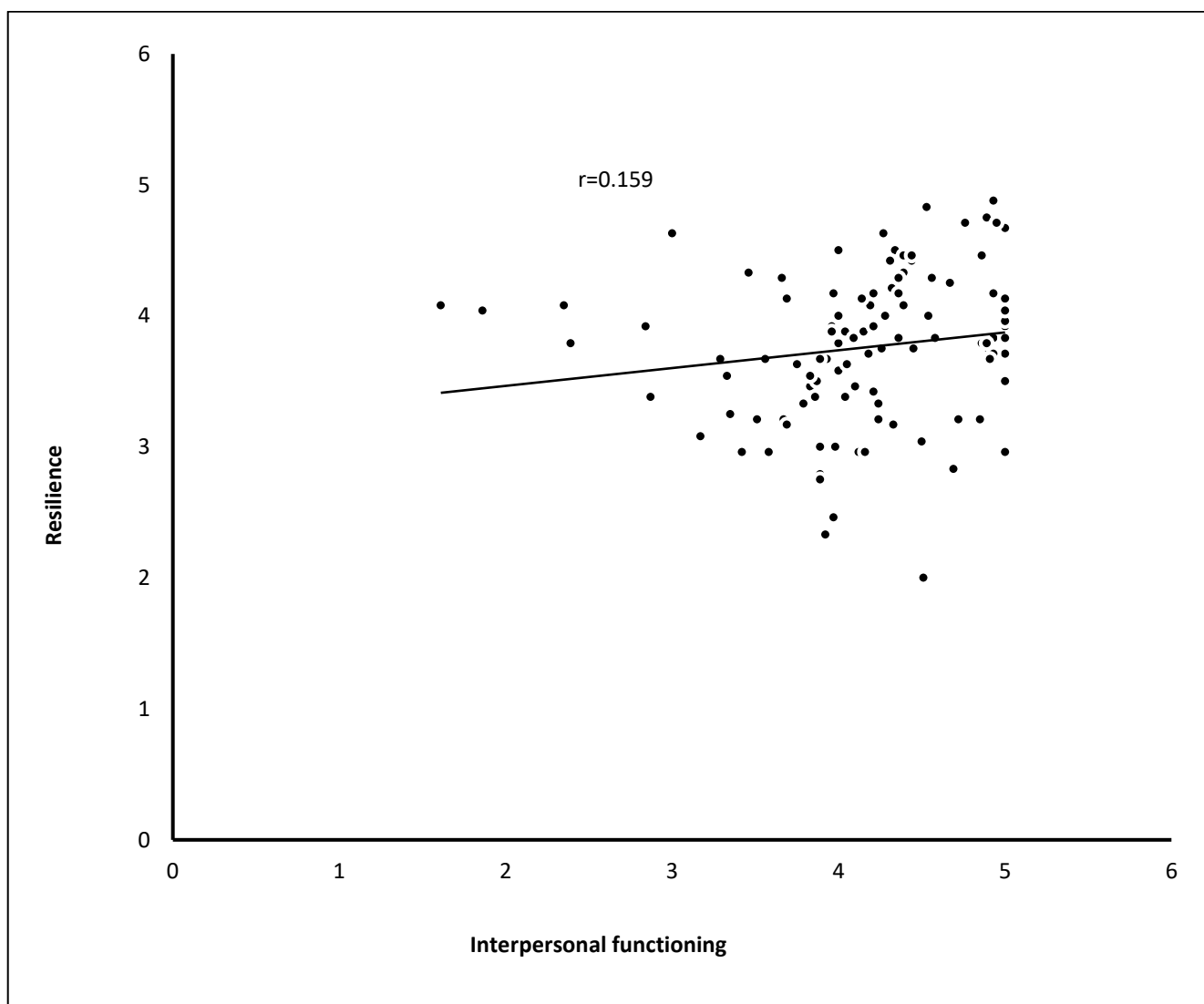


Figure 1: Scatter plot for Correlation between Resilience and Interpersonal Functioning

The scatter plot indicates that there was some evidence of a positive correlation between resilience and interpersonal functioning as indicated by the scatter plot trend line. This is because the coordinate points cluster near the line to fit and form a visible pattern. The result is supported by Gomez-Esquivel et al (2020) study in

Mexico that found that 58.6% of participants showed presence of resilience. Putri et al (2020) study in India also showed that orphans exhibited greater resilience and that it was a predictor of happiness among orphans, accounting for 21.2% of variance. Further, Poya et al (2023) study in Afghanistan revealed that orphaned adolescents were able to achieve post-traumatic growth due to social support, stronger relationships, greater empathy and compassion. On the contrary, Duggal and Wadhawan (2020) study in India reported that orphans were less resilient compared to non-orphans. Noor et al (2024) study in Pakistan too showed that orphans exhibited reduced self-esteem and lower levels of resilience compared to non-orphans.

The study used a simple linear regression model to test the prediction and determine the magnitude of effect of resilience on interpersonal functioning among orphaned adolescent students.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.363 ^a	.432	.418	.63249

a. Predictors: (Constant), Cognitive, Physical, Emotional, Social

The regression model shows a correlation coefficient (R) of 0.363, indicating a weak-to-moderate positive relationship between the predictors (cognitive, physical, emotional, and social factors) and the dependent variable, interpersonal functioning. The R Square (0.432) means that about 43.2% of the variance in resilience is explained by the predictors. The Adjusted R Square (0.418), which accounts for the number of predictors and sample size, suggests that the true explanatory power is about 41.8%, a slightly more conservative estimate but still showing moderate strength. The standard error of the estimate (0.63249) indicates the average prediction error of the model.

Table 4. ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.194	4	1.548	3.871	.006 ^b
	Residual	40.805	454	.400		
	Total	46.998	458			

a. Dependent Variable: Resilience

b. Predictors: (Constant), Cognitive, Physical, Emotional, Social

The ANOVA results indicate that the overall regression model is statistically significant ($F = 3.871$, $p = .006$). This means that the four predictors—cognitive, physical, emotional, and social factors—together explain a meaningful amount of variance in resilience. In other words, the combined effect of these variables significantly contributes to predicting resilience levels in the study population.

Table 5. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.950	.322		9.162	.000
	Social	.101	.098	.137	2.027	.007
	Physical	.112	.087	.157	3.282	.020
	Emotional	.082	.077	.124	3.058	.023
	Cognitive	.043	.051	.078	2.850	.037

a. Dependent Variable: Resilience

The coefficients results indicate that all four predictors—social, physical, emotional, and cognitive factors—make significant positive contributions to resilience. The model constant is 2.950 ($p < .001$), representing the baseline level of resilience when all predictors are absent. Social factors ($B = 0.101$, $\beta = 0.137$, $t = 2.027$, $p = .007$) significantly enhance resilience, suggesting that stronger social support improves coping capacity. Physical factors ($B = 0.112$, $\beta = 0.157$, $t = 3.282$, $p = .020$) exert the strongest influence, highlighting the importance of physical well-being in building resilience. Emotional factors ($B = 0.082$, $\beta = 0.124$, $t = 3.058$, $p = .023$) also play a significant role, indicating that emotional resources contribute positively to resilience. Finally, cognitive factors ($B = 0.043$, $\beta = 0.078$, $t = 2.850$, $p = .037$) add a smaller but still significant effect, showing that cognitive abilities also strengthen resilience.

CONCLUSION

The study findings indicated that resilience is reinforced by social, physical, emotional and cognitive strengths, all of which directly or indirectly shape interpersonal functioning. The study findings revealed that strong interpersonal connections such as supportive networks, trusted friendships, emotional stability, constructive communication play important role in fostering resilience. The study demonstrates that resilience is multidimensional construct shaped by social, physical, emotional and cognitive factors, each making a significant contribution. The study shows that social and physical factors are stronger predictors compared to emotional and cognitive aspects. The study bridges resilience with interpersonal functioning, offering a nuanced understanding of how personal and environmental resources interact to strengthen adolescents' capacity for adaptation. The study recommended need for enhanced social support systems in schools, promotion of physical well-being, developing emotional regulation skills, strengthening cognitive coping strategies, and integrating resilience-building frameworks to ensure a holistic approach to students' well-being and academic success.

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