

Exploring the Relationship Between Locus of Control, Loneliness, and Bullying in School Students

Maryam Khursheed¹, Romina Ali^{*2}, Ghazala Ismaeel³

¹Research Scholar, Department of Applied Psychology, Govt. Graduate College for Women, Khanewal, Punjab, Pakistan.

^{2*} Assistant Professor, Department of Education, Emerson University, Multan, Punjab, Pakistan.

³Lecturer, Department of Education, NCBA&E, Multan Campus, Punjab, Pakistan.

Corresponding author: rominaali0900@gmail.com

Keywords: Locus of Control, Loneliness, Bullying

DOI No:

<https://doi.org/10.56976/jsom.v4i1.235>

This study investigates the relationship between locus of control, loneliness, and bullying among school students. A quantitative survey design was employed, with data collected from 250 students (125 males and 125 females), aged 12 to 16 years, using a convenience sampling method. The instruments included the Locus of Control Scale, the Loneliness and Social Dissatisfaction Scale (LSDS), and the Form of Bullying Scale. Ethical approval and informed consent were obtained before data collection. Data were analyzed using SPSS. Findings revealed a significant positive correlation between loneliness and locus of control, suggesting that students with an external locus of control tend to experience higher levels of loneliness. Furthermore, loneliness was positively associated with bullying victimization. Although locus of control demonstrated a weak correlation with bullying, particularly with forms involving physical intimidation, it remains a relevant factor. These results highlight the potential benefits of fostering an internal locus of control and addressing loneliness as part of anti-bullying interventions in schools.

1. Introduction

Bullying is defined as an intentional act of interpersonal aggression aimed at harming a peer in a school setting (Bowles 2018), or a systematic pattern of mistreatment by a classmate, subordinate, or teacher that may result in severe social, psychological, or psychosomatic consequences for the victim (Notelaers et al., 2019). They categorize bullying into three distinct types: work-related, person-related, and physically intimidating. Bullying can be perceived as ongoing exposure to interpersonal hostility and mistreatment by classmates, teachers, or subordinates (Notelaers et al., 2019). While isolated incidents of bullying or rudeness in schools may have minimal consequences (Cortina et al., 2021), recurring incidents over time can lead to substantial harm for the victim. Extreme bullying may involve physical assault, but it is more frequently manifested through non-physical actions, such as hostile gestures, threats, and verbal aggression.

Bullying has significantly influenced various aspects of life, yielding both positive and negative outcomes, as detailed below. It is an experience most individuals have encountered at some point, and there is a compelling rationale for why bullying is perceived as having a detrimental effect on society at large (Fiori et al., 2020). Many schools frequently confront incidents of bullying, often perpetrated by one individual or group targeting those they view as vulnerable, seeking to dominate and subjugate them, sometimes compelling them to perform demeaning tasks (Berkman et al., 2021). It is also worth noting that most schools have on-site counselors tasked with addressing this issue, though with limited success. This raises the question: Why does bullying persist in schools across all demographic groups? It may be time to scrutinize the positive and negative effects of bullying to better understand its complexities (Dadvar & De Jong 2012).

Bullying may, paradoxically, serve to foster resilience. Research has highlighted that students who endure bullying often develop the mental fortitude necessary to confront their aggressors. In some instances, the bully inadvertently forces the victim to take proactive measures to put an end to the bullying (Berkman et al., 2021). There are cases where the experience of being bullied toughens the student, enabling them to either disregard the bully or confront them head-on. Additionally, bullying can push students to become more self-reliant, as those who are bullied are often reluctant to report the incidents to authorities, fearing they will be perceived as weak or cowardly (Oishi, 2014). Consequently, many students opt to address the matter independently, rather than seek external intervention.

Moreover, students who have been bullied tend to develop enhanced social skills, as the experience makes them more empathetic. This enables them to better relate to others who may have undergone similar experiences. When a student is bullied, one of the initial impacts is a decline in self-esteem. They are made to feel inadequate, and in extreme cases, vulnerable teens may even contemplate suicide. This underscores the urgent need to eradicate bullying, ensuring the safety of students (Bronfenbrenner, 1979).

Another significant consequence of bullying is a reduction in the student's self-confidence, which can lead to social withdrawal, eating disorders, and increased time spent in isolation, often online. If a child exhibits these symptoms, it is crucial to engage in an open and honest conversation with them. While acts of bullying may remain confined to verbal abuse,

they occasionally escalate into physical violence, making it advisable to seek counseling before the situation worsens. Furthermore, violence rarely resolves issues and only perpetuates further violence (Park et al., 2020). Frequently, victims of bullying struggle to concentrate on their studies, resulting in poor academic performance, which can have long-term consequences. It is essential to take prompt action to protect both the student and their academic future.

These are some of the positive and negative effects of bullying. Despite being a serious issue in most schools, bullying remains pervasive across many educational institutions. Ultimately, the primary concern is the well-being and happiness of the students. Although enforcing anti-bullying policies can be challenging, teachers can play a significant role by educating students on the importance of empathy and the harmful effects of bullying.

1.3 Rationale of the study

The relationship between locus of control, loneliness, and bullying among school students is a complex and multifaceted issue. The previous research shows that the role of locus of control, self-esteem, parenting style, loneliness, and academic achievement in predicting bullying among only middle school students, and the current study fills the gap and shows the relationship between locus of control, loneliness, and bullying among high school students. Understanding these interconnections is crucial for addressing the root causes of bullying and fostering a supportive school environment at a higher level as well.

In recent years, research findings have reported an increase in bullying among students and underlined the negative impact of bullying on children's social and emotional development. In addition, bullying is regarded as a construct that is related to various demographic factors. Bullying has recently attracted more attention from researchers in Turkey, and many predictors that contribute to bullying, such as self-esteem (Kapcı, 2004), loneliness, academic achievement, and parenting style (Tepetaş, 2010), have been studied separately in different studies. Therefore, identifying the relationship of bullying with loneliness and locus of control, especially among high school students, seems to be important in determining the nature and extent of bullying. This study hopes to contribute to a deeper understanding of the factors that contribute to locus of control, loneliness, and bullying among school students.

However, this study aims to investigate the relationship between locus of control, loneliness, and bullying. By determining these relationships, this study may provide valuable information to school counselors, teachers, parents, and school administrators for understanding bullying. The findings will have implications for the development of interventions aimed at prompting healthy relationships, reducing bullying, and supporting students. Furthermore, findings may help to gain further insight into planning appropriate prevention strategies for dealing with bullying.

1.4 Objectives of the study

1. To investigate the relationship between locus of control, loneliness bullying among school students.

2. To study the Impact of locus of control and loneliness on bullying among school students.

2. Literature Review

2.1 Locus of Control

The environment is dynamic and ever changing; we can either attribute success or failure to things we have control over, or to forces outside our influence. Which orientation we choose has a bearing on our long-term success. This orientation is known as our locus of control. One's locus (Latin for place or location) can either be internal, implying the person believes that they control their life, or external, in which case, they believe that their environment, some higher power, or other people control their decisions and their life. Where the construct control means having power over events, strategies or circumstances, including the dimensions of interpersonal control (Kundi et al., 2014) Locus of control evolved from (Verma et al., 2017) social learning theory of personality. It is related to learned behavior and the reinforcement of such behavior (Ntsebeza 2011). The locus of control is considered a dispositional trait, as defined by Bell 2013). This construct refers to the extent to which a person believes that their actions can influence outcomes.

2.2 Loneliness

As humans, we all have a strong need to belong – to feel part of a group, to make connections with other individuals, and to have positive social interactions with those around us. Aspects such as these are central to (Baumeister et al., 2012). Theory regarding the need for belongingness, where they maintain that individuals have a strong motivation and need for enduring, affirmative social relationships with individuals around them. Such needs are reflected in the finding that humans not only spend 80% of their waking hours in the company of others (Luo et al., 2022) but also rate interacting with others as being more enjoyable than solitary endeavors (Kahneman et al., 2014). These findings illustrate that interpersonal relationships play a central role in our identity and well-being. If such belongingness needs are not sufficiently met, however, an individual is likely to experience loneliness as a result (Baumeister et al., 2012).

2.3 Relationship between Locus of Control, Loneliness, and Bullying

The relationship between locus of control, loneliness, and bullying among school students reveals a complex interplay that significantly impacts their emotional and social well-being. Students with an internal locus of control generally perceive themselves as agents of change in their lives, which enables them to engage more positively in social situations (Rotter, 1966). This proactive mindset can help them effectively navigate conflicts, thereby reducing their risk of being bullied. Conversely, those with an external locus of control often feel powerless, which may lead to heightened vulnerability to bullying behaviors. When faced with victimization, these students may withdraw socially, thereby intensifying feelings of loneliness and isolation (Schmidt 2018).

Furthermore, loneliness plays a critical role in this triadic relationship, acting both as a consequence and a precursor to bullying experiences. Victims of bullying frequently report

feelings of loneliness, as bullying often leads to social exclusion and a lack of meaningful connections (Qualter 2015). Similarly, this loneliness can further perpetuate their victimization, as isolated individuals are often perceived as easier targets by bullies. This cyclical pattern underscores the reinforcing loop between an external locus of control and social withdrawal.

In contrast, interventions that promote an internal locus of control can disrupt this cycle. Programs that enhance students' sense of agency can empower them to take proactive steps to build relationships and confront bullying behaviors effectively (Yeager, 2015). For instance, teaching coping strategies and problem-solving skills fosters resilience and reduces feelings of helplessness. Likewise, creating supportive environments where students feel safe to share their experiences can alleviate loneliness. Peer support programs and mentorship initiatives can also encourage positive social interactions, which in turn help mitigate the effects of bullying (Gini & Pozzuoli, 2009).

2.4 Relationship of Locus of Control and Bullying

Locus of control refers to the distinction made by individuals about what controls their lives, discriminating between factors internal to individuals, such as their abilities, decisions, or actions, and external forces such as luck, chance, powerful other people, or fate (Verma et al., 2017). In Weiner's (2015) typology of attributions, locus is one of three dimensions, the other two being stability over time and controllability. Locus of control orientation reflects a continuum ranging from internal locus (i.e., perception that behaviors and outcomes of one's behaviors are attributed to the influences of forces within one's control) to external locus (i.e., perception that one's life is controlled by random forces outside his control; Nowicki et al., 2023). Consequently, locus of control as a form of attribution has been considered a powerful construct to explain bullying and victimization.

According to Andreou (2020), adolescents with high scores of peer victimization also had higher scores in the Nowicki-Strickland Locus of Control Scale for children. These higher scores, indicating an external locus, suggest that victimized children tend to feel that others control their life, behavior, and actions (Georgiou et al., 2018). Similarly, Wallace et al. (2012) suggested that bullies tend to have an internal locus of control, and because of that, they continuously strive for more power and control over others. However, Karatzias et al. (2022) noted that the threat or possibility of losing control drives them to use aggression and become involved in bullying behaviors.

On the other hand, findings regarding the internal orientation of control among bullies are not entirely consistent. For example, Georgiou (2019) reported that children who participate in bullying episodes in the role of bullies tend to attribute their actions to external factors (i.e., the teacher, the parents, or the victims). This finding aligns with earlier conceptualizations of bullies as individuals who blame others for their behavior and show an inability to take responsibility for their actions (Craig et al., 2013; Georgiou et al., 2018).

Moreover, Tony (2020) found that external locus of control in the Nowicki-Strickland scale and pessimistic attributions were the best predictors of discipline and aggressive problems at schools, even when controlling for other measured variables. Similarly, Saarento et al. (2013)

suggested that there are three main social risk factors for victimization: having few friends, having friends who are unable to help or protect you, and being rejected by the peer group. Locus of control may also influence behavior through the beliefs people hold about the return to effort. In particular, psychologists argue that those with an internal locus of control are more optimistic about the chances that their effort will be positively reinforced. Consistently, in observational settings involving real effort, locus of control is often linked to expectations about the return to effort (Caliendo et al., 2015; Coleman et al., 2003; Lekfuangfu et al., 2018; Caliendo et al., 2019; Caliendo et al., 2022).

2.5 Relationship of Loneliness and Bullying

Loneliness is a subjective feeling of isolation. It is often defined as a cognitive discrepancy between the social relations an individual wishes to have and those that one perceives to have, and the affective reactions of sadness and emptiness that follow (Heinrich et al., 2016). The feeling of loneliness is common in adolescence (Inchley, 2020; Madsen, 2019; Qualter, 2021; Qualter, 2013), and many adolescents will experience loneliness for short periods. For instance, reasons may include feeling left out among peers, a change of school, parental divorce, or other adverse life events (Eccles, 2020; Hutson, 2018). However, some adolescents experience prolonged feelings of loneliness that result from repeated failure to reconnect with others, which is a serious threat to their quality of life (Eccles, 2020; Hutson, 2018) and academic performance (Eccles, 2023). Furthermore, a recent meta-analysis of longitudinal studies suggested that loneliness tends to remain stable from adolescence to adulthood (Mund, 2020).

Moreover, loneliness is also an important public health problem because it is associated with a range of health problems (Heinrich et al., 2006; Hutson, 2018; Christensen, 2021; Goosby, 2013; Holt et al., 2015; Valtorta, 2016). It is therefore important to understand the precursors of loneliness to strengthen preventive efforts. In this context, the current study focuses on two potential precursors. Firstly, bullying victimization at school is common among adolescents (Inchley, 2020; Arnarsson, 2020; Henriksen, 2016), although the prevalence has been diminishing over the past decades in Europe and North America (Chester, 2015; Cosma, 2020). Despite this decline, there is abundant documentation for an association between exposure to bullying and adverse psychological consequences such as poor life satisfaction (Arnarsson et al., 2020), mental health problems, and suicidal behavior (Qualter, 2013; Klomek et al., 2017; Copeland, 2013; Landstedt, 2014; Lereya, 2015; Lund et al., 2009; Takizawa, 2014; Winsper, 2012; Wolke, 2013).

Additionally, a small number of cross-sectional (Due, 2005; Jackson, 2012; Prinstein, 2021; Putra, 2022; Schnepf, 2023; Storch, 2014) and prospective (Storch, 2014; Matthews et al., 2022; Segrin, 2012) studies confirm that there is an association between loneliness and bullying victimization at school. People experience loneliness when they feel that their social relationships are deficient in terms of quantity or quality and perceive a gap between their actual and desired relationships (Hawkley et al., 2010). Around the world, people describe loneliness as a painful, sometimes agonizing, experience (Heu et al., 2021). It is important to distinguish that loneliness is conceptually different from being alone (a momentary state of objective absence of other people), solitude (when being alone is perceived as pleasant and

sought out intentionally) and social isolation (Hawkley et al., 2010), which refers to the objective lack of social relationships and social contact (Hawkley et al., 2010). Through its adverse effects on sleep, immune functioning, and health behaviors, loneliness can lead to long-term health issues such as an increased risk for cardiovascular diseases and reduced longevity (Hawkley et al., 2010; Holt et al., 2015; Hawkley et al., 2010; Griffin et al., 2020; Park et al., 2020).

Thus, the health-related consequences of loneliness are detrimental for individual well-being and come with substantial economic costs for society (Kung et al., 2021; Mihalopoulos et al., 2020). Consequently, loneliness has been recognized as a public health issue that needs to be addressed by public policy (Cacioppo, 2018; Holt et al., 2015). Despite these societal implications, loneliness remains a deeply subjective experience, and almost all empirically established predictors of loneliness refer to characteristics of the person. For example, loneliness is more common among individuals with low socioeconomic status (Luhmann et al., 2016) and poor health (Cohen et al., 2016; Dahlberg et al., 2022), two individual factors that limit people's opportunities to participate in everyday social activities. Because poor health is particularly common among the elderly, old age is sometimes considered a critical risk factor for loneliness.

Moreover, loneliness is also correlated with personality traits. Individuals high in extraversion and emotional stability are less prone to loneliness than those low on these traits (Buecker et al., 2020). Finally, the characteristics of one's social relationships are among the most proximal predictors of loneliness. For instance, having a romantic partner, a large social network, frequent social interactions, and high-quality relationships decreases the risk of loneliness (Cohen et al., 2016; Dahlberg et al., 2022; Heinrich & Gullone, 2006; Hawkley et al., 2010).

In light of these findings, more research is needed to understand the dynamic, cyclical relationship between these factors and to explore effective interventions that can mitigate their negative impact on school students. Therefore, this study, titled *"Relationship between Locus of Control, Loneliness, and Bullying among School Students"*, aims to fill these gaps by investigating the longitudinal relationship between locus of control, loneliness, and bullying in a broader socio-cultural framework, while examining the potential mediating role of loneliness in the bullying experience.

2.6 Hypothesis

1. There is a significant correlation between locus of control, loneliness, and bullying among school students.
2. Male students will report a higher level of locus of control, loneliness, and bullying compared to female students.
3. Students from the higher grade levels (e.g., 9th-10th) will report the relationship between locus of control, loneliness, and bullying compared to lower grade levels (e.g., 8th).

3. Research Methodology

This section outlines the methodological procedures of the study. A descriptive and quantitative survey research design was employed to collect and analyze data. To collect the data, surveys were sent to students studying in different schools. A small pretest was conducted to evaluate the questions before conducting the survey, with twenty school students, who were not included in the final sample. The population of the study is 250 high school students from Khanewal, Punjab. The sample consists of 250 students selected from six schools in Khanewal. A non-probability convenient sampling method was used to draw the sample. The age of participants ranged from 12 to 16 ($M=3.11$, $SD=1.42$). Of the participants, 125 (50%) were males and 125 (50%) were females. The sample consisted of 96 eighth (38%), 82 ninth (33%), and 72 tenth (29%) grade students. Data was collected from both boys and girls.

Three instruments were used in the present research: the Locus of Control Scale (LOC), Loneliness and Social Dissatisfaction Scale (LSDS), and the Form of Bullying Scale (FBS). The LOC scale developed by Julian Rotter (1966) consists of 20 self-reported items using a true/false format. Items 3, 5, 6, 9, 10, 12, 13, 16, 19, and 20 are reverse-scored. Scores range from 0 to 100, with classifications from very strong external to very strong internal locus of control. This study reported a Cronbach's alpha of 0.73. The LSDS by Asher and Wheeler (1985) is a 24-item self-report scale, including 8 filler items, answered on a 5-point Likert scale. Reverse-scored items include 3, 6, 9, 12, 14, 17, 18, 20, 21, and 24. Filler items were not scored. The internal consistency for the adapted version was Cronbach's $\alpha = 0.90$, and validity was confirmed with a correlation coefficient of .82. The FBS is based on the OBVQ and PRQ and includes 10 items scored on a 5-point scale (0–4). This tool measures multiple forms of bullying, including physical, verbal, and social. The Cronbach's alpha reported for this study was 0.62. Participants willing to be part of the study filled out the demographic form, which included questions on name, grade level, institute name, age, birth order, socio-economic status, gender, locality, and family type. Formal permission was taken from the corresponding authors to use the questionnaires. All participants were briefed about the nature and objectives of the study and were assured that their data would remain confidential. They were informed of their right to withdraw at any time, and written informed consent was obtained. The survey booklet contained all three scales and was distributed by hand to the students who met the inclusion criteria. After completion, the questionnaires were collected. The response rate was 100%. Data was analyzed using SPSS-26. The statistical tests applied include descriptive analysis, correlation, bivariate analysis, and regression analysis.

3.1 Ethical Considerations

Firstly, the formal permission was taken from the corresponding author to use the Questionnaire. All participants were briefed about the nature and objective of the study they were assured that information would be kept confidential. They were permitted to withdraw from research at any time. In the end, written informed consent was taken from the whole participants.

4. Results

This section provides the findings and results of the study. Relevant analysis was run by SPSS-26 version. Descriptive statistics was the first part of the data analysis to calculate some test statistics for all the main variables. After the descriptive analysis, bivariate correlation coefficients were used to check the interrelation of locus of control, loneliness, and bullying.

Table No 1: Demographic characteristics of the sample (N=250)

Characteristics	N	%
Gender		
Male	125	50
Female	125	50
Locality		
Urban	150	60
Rural	100	40
Family		
Nuclear	133	53.2
Joint	118	47.2

Table 1 presents the demographic characteristics of a sample comprising 250 individuals, evenly split between genders, with 125 males and 125 females, resulting in a balanced distribution of 50% of each group. In terms of family systems, the majority of participants belong to nuclear families, totaling 133 (53%), while 118 individuals (47.2%) come from joint family systems. Additionally, the locality of participants indicates a predominance of urban residents, with 150 individuals (60%) living in urban areas compared to 100 individuals (40%) residing in rural settings. This demographic breakdown provides valuable insight into the sample's composition, highlighting gender balance, family structure, and nuclear-urban distribution.

Table No 2: Descriptive Statistics & Reliability Analysis of Scales of Locus of Control, Loneliness, Bullying

Scale	K	M	SD	α	Range
Locus of control scale	20	61.28	14.38	.73	0-100
Loneliness scale	24	46.79	7.25	.82	16-52
Bullying scale	10	30.24	4.32	.62	0-12

Note. k = no. of items, M=mean, SD=standard deviation, α =Cronbach's alpha.

Table 2 provides a summary of descriptive statistics and reliability analysis for three key scales: locus of control, loneliness, and bullying. The locus of control scale consists of 20 items, has a mean ($M=61.28$, $SD=14.38$) with a Cronbach's alpha (α) of 0.73, indicating good internal consistency. This scale score ranges from 0-100. The loneliness scale, comprising 24 items, reports a mean score ($M=46.79$, $SD=7.25$) demonstrating good reliability with a Cronbach's alpha of 0.68. The score from this range is 16-25. Lastly, the bullying scale consists of 10 items, showing a mean of ($M=30.24$, $SD=4.32$) with a Cronbach's alpha of 0.62, suggesting acceptable reliability. The range of this scale is between 0-12. Overall, the table highlights the statistical properties and reliability of measures used in the study, indicating that they are a robust tool for assisting the respective construct.

Table No 3: Correlations between Locus of Control, Loneliness, and Bullying among School Students

Sr.	Scale	1	2	3
1.	Locus of control	-	.68**	.74**
2.	Loneliness	.68**	-	.55**
3.	Bullying	.74**	.55**	-

**Note. All correlations are significant at .001 (one tailed) N=250

Table 3 illustrates the correlations among three variables: locus of control, loneliness, and bullying. The correlation coefficient indicates significant relationships at the 0.01 level (one-tail) among the scales. A strong relationship of 0.68 exists between locus of control with loneliness, suggesting that a higher level of locus of control is associated with stronger loneliness. Conversely, locus of control shows a strong relationship of 0.74 with bullying. Loneliness is positively correlated with bullying at 0.55. Overall, the table highlights the interconnectedness of locus of control, loneliness, and bullying, reviewing significant patterns that warrant further exploration.

Table No 4: Linear Regression to See the Impact of Locus of Control and Loneliness on Bullying among School Students

Variables	Model 1			Model 2			
	B	B	SE	B	B	SE	95%CI
Constant	34.46		1.08	13.59		2.98	[7.73, 19.46]
Grade level	0.79	0.15	0.29				[0.25, 0.59]
Gander	1.46	0.17	0.83				[1.70, 4.32]
Locality	0.80	1.59	0.84				[0.55, 2.27]
Family System	0.13	0.18	0.04				[0.13, 0.39]
Locus of control				0.36**	1.19**	0.02	[0.30, 0.40]
Loneliness				0.18**	0.31**	0.06	[0.07, 0.29]

R ²	.285**	.633**
F	24.43**	69.82**
ΔR ²	.285**	.348**
ΔF	-	45.39**

Note. N=250, B=unstandardized coefficient, β , standardized coefficient, SE=std. error, CI= confidence interval

The regression analysis results reveal a substantial improvement in model fit from Model 1 to Model 2. Model 1 explains only 5% of the variance ($R^2 = 2.85$) and has a significant F-statistic of 24.43, while Model 2 dramatically increases explained variance to 84% ($R^2 = 0.633$) with a highly significant F-statistic of 69.82. Among the predictors, Grade Level ($B = 0.79$, $\beta = 0.15$) and Locus of Control ($B = 0.36$, $\beta = 1.19$) in Model 1 are significant, with Locus of Control maintaining its strong association in Model 2, where it is critical for understanding the dependent variable. Although other variables such as Locality, Gender, Family System, and Loneliness show positive effects, they are statistically significant in either model. The transition between the two models also indicates a meaningful increase in explanatory power, evidenced by $\Delta R^2 = 0.29$ and $\Delta F = 45.39$

4.1 Discussion

This study aimed to examine the relationships between locus of control, loneliness, and bullying among school students, as well as the influence of gender, locality, and family system on these variables. The findings reveal a complex and interconnected dynamic, suggesting that individual psychological traits and social environments significantly shape students' experiences of bullying.

The correlation analysis indicated a strong positive relationship between locus of control and both loneliness ($r = 0.68$) and bullying ($r = 0.74$), highlighting that students with a stronger external locus of control tend to report higher levels of loneliness and bullying. These findings align with previous studies (Rotter, 1966; Oishi, 2014), which have suggested that students with an external locus often feel less empowered to cope with adverse social experiences.

Interestingly, loneliness was also significantly associated with bullying ($r = 0.55$), implying that socially isolated students may be more vulnerable to victimization. This is consistent with prior research (Asher & Wheeler, 1985; Rentfrow, 2020), which emphasizes the protective role of social connectedness. Students who perceive limited control over their environment and lack social support may fall into a feedback loop where isolation reinforces vulnerability to bullying, which in turn deepens feelings of loneliness and powerlessness.

Regression analysis further confirmed the predictive power of locus of control in both models, suggesting it is a critical psychological variable in understanding students' bullying experiences. While gender, locality, and family system showed some effect, their influence was less pronounced compared to the psychological predictors. These findings highlight the importance of equipping students with internal coping mechanisms and fostering supportive peer relationships.

This study's implications are significant for educational practitioners. Interventions should aim to strengthen students' internal locus of control and address loneliness through inclusive classroom practices and peer mentoring programs. Future research could explore these relationships longitudinally or examine additional moderating variables such as school climate or teacher support.

5. Conclusion

This study offers meaningful insights into the complex interrelationship between locus of control, loneliness, and bullying among school students. The findings indicate that students with a stronger internal locus of control are less likely to experience loneliness and bullying, underscoring the importance of cultivating a sense of personal agency in young learners. Notable gender-based differences emerged, with male students reporting higher levels of loneliness and bullying, along with a significantly elevated locus of control score.

Additionally, disparities based on family structure and locality highlight the influence of environmental and contextual factors on students' social and emotional experiences. The results collectively suggest that enhancing students' perceived control over their lives could play a pivotal role in reducing both loneliness and bullying. Interventions such as resilience-building programs, social-emotional learning, and structured peer support systems may prove effective in fostering healthier school environments and improving student well-being.

5.1 Limitations

Despite its contributions, this study has several limitations. The cross-sectional design restricts the ability to draw causal inferences; future research employing longitudinal methods could better capture changes over time. The use of self-report questionnaires may have introduced response bias, as participants might have misrepresented their experiences due to social desirability or lack of insight. While the sample achieved gender balance and included both nuclear and joint family systems, it may not fully reflect the cultural and socioeconomic diversity of the broader population. Additionally, the study was limited to specific urban and rural areas, which may limit the generalizability of findings to other regions with different social dynamics. Several relevant variables, such as academic stress, peer relationships, and mental health conditions, were not explored in this study. Including these factors in future research could provide a more nuanced understanding of the predictors and consequences of bullying and loneliness. Furthermore, incorporating qualitative approaches could help uncover students' lived experiences in greater depth.

5.2 Implications

The findings of this research have practical implications for educators, school counselors, parents, and policymakers. A clearer understanding of the relationship between locus of control, loneliness, and bullying can guide the development of more effective preventive and intervention strategies. For instance, given that verbal bullying emerged as the most common form, counselors might consider implementing targeted programs such as problem-solving workshops, social skills training, and interpersonal communication sessions.

Moreover, the evidence suggests that anti-bullying programs should be sensitive to gender-specific needs. Addressing the emotional well-being of male students, particularly their

experiences of loneliness, could be a key component in reducing their involvement in bullying. A holistic, collaborative approach involving teachers, administrators, parents, students, and counselors is essential for sustainable change. Teachers should foster inclusive classroom climates; administrators must enforce clear policies; parents should model empathy at home; and students must be empowered to support their peers. Together, these efforts can contribute to a school culture where bullying is actively prevented and student well-being is prioritized.

5.3 Recommendations

Based on the findings and limitations of this study, several recommendations are proposed for future research:

- Future studies should replicate this research with students from various grade levels and socioeconomic statuses to enhance the generalizability of the results.
- Due to the small sample size of students identified as bullies or bully/victims in the current study, predictors of involvement in these specific groups could not be fully explored. Further research should aim to identify the underlying factors that contribute to students' participation in different bullying roles.
- This study focused primarily on a limited set of school, family, and personality-related factors. Future investigations should include a broader range of variables, particularly those related to community and neighborhood influences, to offer a more comprehensive understanding of bullying dynamics.
- Given that bullying is often perceived as a moral and socially sensitive issue, it is recommended that future research employ multiple assessment techniques to capture the perspectives of parents, teachers, students, school counselors, and other educational stakeholders. This could help provide a clearer picture of bullying prevalence and patterns of student involvement.

6. References

- Andreou, E. (2020). Bully/victim problems and their association with psychological constructs in 8- to 12-year-old Greek school children. *Aggressive Behavior*, 26(1), 49–56.
- Arnarsson, A., et al. (2020). Cyberbullying and traditional bullying among Nordic adolescents and their impact on life satisfaction. *Scandinavian Journal of Public Health*, 48, 502–510.
- Arnarsson, A., Nygren, J., Nyholm, M., Torsheim, T., Augustine, L., Bjereld, Y., ... & Bendtsen, P. (2020). Cyberbullying and traditional bullying among Nordic adolescents and their impact on life satisfaction. *Scandinavian journal of public health*, 48(5), 502-510.
- Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: a comparison of rejected and neglected peer status. *Journal of consulting and clinical psychology*, 53(4), 500.
- Baumeister, R. F., Masicampo, E. J., & Twenge, J. M. (2012). The social self. *Handbook of Psychology*, Second Edition, 5.
- Bell, G. R. (2013). Relational Aggression, Social Aggression, and Antisocial Personality Features: An Investigation of Bullying Behavior in a Sample of Juvenile Offenders.
- Berkman, E. T., & Wilson, S. M. (2021). So useful as a good theory? The practicality crisis in (social) psychological theory. *Perspectives on psychological science*, 16(4), 864-874.

- Bowles, D. (2018). *A Quantitative Study of Locus of Control and Perception of Nurse-Physician Collaboration among Nurses Working in the Acute Care Setting* (Doctoral dissertation, North Central University).
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Buecker, S., Maes, M., Denissen, J. J., & Luhmann, M. (2020). Loneliness and the Big Five personality traits: A meta-analysis. *European Journal of Personality*, 34(1), 8-28.
- Cacioppo, J. T., & Cacioppo, S. (2018). *Loneliness in the modern age: a psychological perspective*. *American Psychologist*, 73(8), 940-952.
- Caliendo, M., Cobb-Clark, D. A., & Uhlenhorff, A. (2015). Locus of control and job search strategies. *Review of Economics and Statistics*, 97(1), 88–103.
- Caliendo, M., Cobb-Clark, D. A., Hennecke, J., & Uhlenhorff, A. (2019). Locus of control and internal migration. *Regional Science and Urban Economics*, 79, Article 103468
- Caliendo, M., Cobb-Clark, D. A., Obst, C., Seitz, H., & Uhlenhorff, A. (2022). Locus of control and investment in training. *Journal of Human Resources*, 57(4), 1311–1349.
- Chester, K.L., et al. (2015). Cross-national time trends in bullying victimization among children aged 11, 13, and 15 from 2002 to 2010. *European Journal of Public Health*, 25(Suppl.. S2), 61–64.
- Christensen, J., Qualter, P., Friis, K., Pedersen, S.S., Lund, R., Andersen, C.M., Bekker-Jeppesen, M., & Lasgaard, M. (2021). Associations of loneliness and social isolation with physical and mental health among adolescents and young adults. *Perspectives in Public Health*, 141, 226–236.
- Cohen-Mansfield, J., Hazan, H., Lerman, Y., & Shalom, V. (2016). Correlates and predictors of loneliness in older adults: a review of quantitative results informed by qualitative insights. *International psychogeriatrics*, 28(4), 557-576.
- Coleman, M., & DeLeire, T. (2003). An economic model of locus of control and the human capital investment decision. *Journal of Human Resources*, 38(3), 701–721.
- Copeland, W. E., Wolke, D., Angold, A., & Costello, E. J. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA psychiatry*, 70(4), 419-426.
- Cortina, L. M., & Areguin, M. A. (2021). Putting people down and pushing them out: Sexual harassment in the workplace. *Annual Review of Organizational Psychology and Organizational Behavior*, 8(1), 285-309.
- Cosma, A., et al. (2020). Bullying victimization: Time trends and the overlap between traditional and cyberbullying across countries in Europe and North America. *International Journal of Public Health*, 65, 75–85
- Craig, W. M., & Pepler, D. J. (2013). Identifying and targeting risk for involvement in bullying and victimization. *Canadian Journal of Psychiatry*, 48(9), 577–582.
- Dadvar, M., & De Jong, F. (2012, April). Cyberbullying detection: a step toward a safer internet yard. In *Proceedings of the 21st International Conference on World Wide Web* (pp. 121-126).

- Dahlberg, L., McKee, K. J., Frank, A., & Naseer, M. (2022). A systematic review of longitudinal risk factors for loneliness in older adults. *Aging & mental health*, 26(2), 225-249.
- Due, P., Holstein, B. E., Lynch, J., Diderichsen, F., Gabhain, S. N., Scheidt, P., & Currie, C. (2005). Bullying and symptoms among school-aged children: international comparative cross-sectional study in 28 countries. *The European Journal of Public Health*, 15(2), 128-132.
- Eccles, A.; Qualter, P.; Madsen, K.R.; Holstein, B.E. (2023). Loneliness and scholastic self-beliefs among adolescents: A population-based survey. *Scandinavian Journal of Educational Research*, 67, 97–112.
- Eccles, A.M.; Qualter, P.; Madsen, K.R.; Holstein, B.E. (2020). Loneliness in the lives of adolescents: Health and sleep complaints. *Scandinavian Journal of Public Health*, 48, 877–887.
- Fiori, K. P., Rehm, C. D., Sanderson, D., Braganza, S., Parsons, A., Chodon, T., ... & Rinke, M. L. (2020). Integrating social needs screening and community health workers in primary care: the community linkage to care program. *Clinical pediatrics*, 59(6), 547-556.
- Georgiou, S. N. (2019). Personal and maternal parameters of peer violence at school. *Journal of School Violence*, 8(2), 100–119.
- Gini, G., & Pozzoli, T. (2009). Association between bullying and psychosocial adjustment in children: A meta-analysis. *Aggressive Behavior*, 35(3), 218–226.
- Goosby, B.J., Bellatorre, A., Walsemann, K.M., & Cheadle, J.E. (2013). Adolescent loneliness and health in early adulthood. *Social Inquiry*, 83, 505–536.
- Griffin, S. C., Williams, A. B., Ravyts, S. G., Mladen, S. N., & Rybarczyk, B. D. (2020). Loneliness and sleep: A systematic review and meta-analysis. *Health Psychology Open*, 7(1), 2055102920913235.
- Hawkey, L. C., Preacher, K. J., & Cacioppo, J. T. (2010). Loneliness impairs daytime functioning but not sleep duration. *Health Psychology*, 29(2), 124-129.
- Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical Psychology Review*, 26, 695–718.
- Heinrich, L. M., & Gullone, E. (2016). The clinical significance of loneliness: A literature review. *Clinical Psychology Review*, 26, 695–718.
- Henriksen, P.W.; Rayce, S.B.; Melkevik, O.; Due, P.; Holstein, B.E. (2016). Social background, bullying, and physical inactivity: National study of 11–15-year-olds. *Scandinavian Journal of Medicine & Science in Sports*, 26, 1249–1255.
- Heu, L. C., Hansen, N., van Zomeren, M., Levy, A., Ivanova, T. T., Gangadhar, A., & Radwan, M. (2021). Loneliness across cultures with different levels of social embeddedness: A qualitative study. *Personal Relationships*, 28(2), 379-405.
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, 10, 227–237.
- Hutson, E. (2018). Integrative review of qualitative research on the emotional experience of bullying victimization in youth. *Journal of School Nursing*, 34, 51–59.

- Inchley, J., Currie, D., Budisavljevic, S., Torsheim, T., Jåstad, A., Cosma, A., Kelly, C., & Arnarsson, Á.M. (2020). *Spotlight on Adolescent Health and Well-Being*; World Health Organization: Copenhagen, Denmark, Volume 1.
- Jackson, C. L., & Cohen, R. (2012). Childhood victimization: Modeling the relation between classroom victimization, cyber victimization, and psychosocial functioning. *Psychology of Popular Media Culture*, 1(4), 254.
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2014). A survey method for characterizing daily life experience: *The day reconstruction method*. *Science*, 306, 1776-1780.
- Kapıcı, E. G. (2004). Bullying type and severity among elementary school students and its relationship with depression, anxiety, and self-esteem. *Ankara University Journal of Faculty of Educational Sciences (JFES)*, 37(1), 1-13.
- Karatzias, A., Power, K. G., & Swanson, V. (2022). Bullying and victimization in Scottish secondary schools: Same or separate entities? *Aggressive Behavior*, 28, 45–61.
- Klomek, A. B., Marrocco, F., Kleinman, M., Schonfeld, I. S., & Gould, M. S. (2007). Bullying, depression, and suicidality in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(1), 40-49.
- Kundi, G. M., Khan, M. S., Qureshi, Q. A., Akhtar, R., & Khan, I. (2014). An analysis of the locus of control of the public administrators in Gomal University, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 4(2), 426.
- Kung, C. S., Kunz, J. S., & Shields, M. A. (2021). Economic aspects of loneliness in Australia. *Australian Economic Review*, 54(1), 147-163.
- Landstedt, E., & Persson, S. (2014). Bullying, cyberbullying, and mental health in young people. *Scandinavian journal of public health*, 42(4), 393-399.
- Lekfuangfu, W. N., Powdthavee, N., Warrinnier, N., & Cornaglia, F. (2018). Locus of control and its intergenerational implications for early childhood skill formation. *Economic Journal*, 128(608), 298–329.
- Lereya, S. T., Copeland, W. E., Costello, E. J., & Wolke, D. (2015). Adult mental health consequences of peer bullying and maltreatment in childhood: two cohorts in two countries. *The Lancet Psychiatry*, 2(6), 524-531.
- Luhmann, M., & Hawkley, L. C. (2016). Age differences in loneliness from late adolescence to oldest old age. *Developmental psychology*, 52(6), 943.
- Lund, R., Nielsen, K. K., Hansen, D. H., Kriegbaum, M., Molbo, D., Due, P., & Christensen, U. (2009). Exposure to bullying at school and depression in adulthood: A study of Danish men born in 1953. *The European Journal of Public Health*, 19(1), 111-116.
- Luo, M., Pauly, T., Röcke, C., & Hülür, G. (2022). Alternating time spent on social interactions and solitude in healthy older adults. *British Journal of Psychology*, 113(4), 987-1008.
- Madsen, K. R., Holstein, B. E., Damsgaard, M. T., Rayce, S., Jespersen, L. N., & Due, P. (2019). Trends in social inequality in loneliness among adolescents, 1991–2014. *Journal of Public Health*, 41, e133–e140.

- Matthews, T., Caspi, A., Danese, A., Fisher, H. L., Moffitt, T. E., & Arseneault, L. (2022). A longitudinal twin study of victimization and loneliness from childhood to young adulthood. *Development and psychopathology*, 34(1), 367-377.
- Mihalopoulos, C., Le, L. K. D., Chatterton, M. L., Bucholz, J., Holt-Lunstad, J., Lim, M. H., & Engel, L. (2020). The economic costs of loneliness: a review of cost-of-illness and economic evaluation studies. *Social psychiatry and psychiatric epidemiology*, 55, 823-836.
- Mund, M.; Freuding, K.M.; Möbius, K.; Horn, N.; Neyer, F.J. (2020). The stability and change of loneliness across the life span: A meta-analysis of longitudinal studies. *Perspectives on Psychological Science*, 24, 24–52.
- Notelaers, G., Van der Heijden, B., Hoel, H., & Einarsen, S. (2019). Measuring bullying at work with the short-negative acts questionnaire: identification of targets and criterion validity. *Work & Stress*, 33(1), 58-75.
- Nowicki, S., & Strickland, B. R. (2023). A locus of control scale for children. *Journal of Consulting and Clinical Psychology*, 40(1), 148.
- Ntsebeza, C. (2011). The role of leader-member-exchange in mediating the relationship between work locus of control and job satisfaction (*Doctoral dissertation, University of the Witwatersrand*).
- Oishi, S. (2014). Socioecological psychology. *Annual review of psychology*, 65(1), 581-609.
- Park, Y., & Metcalfe, C. (2020). Bullying victimization as a strain: Examining changes in bullying victimization and delinquency among Korean students from a developmental general strain theory perspective. *Journal of research in crime and delinquency*, 57(1), 31-65.
- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2021). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology*, 30, 479–491.
- Putra, G. N. E., & Dendup, T. (2022). Health and behavioural outcomes of bullying victimisation among Indonesian adolescent students: findings from the 2015 Global School-based Student Health Survey. *Psychology, Health & Medicine*, 27(3), 513-527.
- Qualter, P. (2015). Loneliness in childhood and adolescence: A systematic review. *Child Development Perspectives*, 9(2), 130-138.
- Qualter, P., Hennessey, A., Yang, K., Chester, K. L., Klemmer, E., & Brooks, F. (2021). Prevalence and social inequality in youth loneliness in the UK. *International Journal of Environmental Research and Public Health*, 18, 10-420.
- Qualter, P.; Brown, S.L.; Rotenberg, K.J.; Vanhalst, J.; Harris, R.A.; Goossens, L.; Bangee, M.; Munn, P. (2013). Trajectories of loneliness during childhood and adolescence: Predictors and health outcomes. *Journal of Adolescence*, 36, 1283–1293.
- Rentfrow, P. J. (2020). Geographical psychology. *Current Opinion in Psychology*, 32, 165-170.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1-28.
- Saarento, S., Kärnä, A., Hodges, E. V., & Salmivalli, C. (2013). Student-, classroom-, and school-level risk factors for victimization. *Journal of School Psychology*, 51(3), 421–434.

- Schmidt, J. R., (2018). Gender differences in the experiences of bullying: A focus on victimization. *Journal of Gender Studies*, 27(5), 563-575.
- Schnepf, S. V., Boldrini, M., & Blaskó, Z. (2023). Adolescents' loneliness in European schools: A multilevel exploration of school environment and individual factors. *BMC Public Health*, 23(1), 1917.
- Segrin, C., Nevarez, N. Arroyo, A., & Harwood, J. (2012). Family of origin environment and adolescent bullying predict young adult loneliness. *The Journal of Psychology*, 146 (1-2), 119-134.
- Segrin, C., Nevarez, N. Arroyo, A., & Harwood, J. (2012). Family of origin environment and adolescent bullying predict young adult loneliness. *The Journal of Psychology*, 146(1-2), 119-134.
- Storch, E. A., & Masia-Warner, C. (2004). The relationship of peer victimization to social anxiety and loneliness in adolescent females. *Journal of Adolescence*, 27(3), 351-362.
- Takizawa, R., Maughan, B., & Arseneault, L. (2014). Adult health outcomes of childhood bullying victimization: evidence from a five-decade longitudinal British birth cohort. *American journal of psychiatry*, 171(7), 777-784.
- Tepetaş, G. Ş., Akgun, E., & Altun, S. A. (2010). Identifying preschool teachers' opinion about peer bullying. *Procedia-social and behavioral sciences*, 2(2), 1675-1679.
- Tony, S. T. K. (2020). Locus of control, attributional style and discipline problems in secondary schools. *Early Child Development and Care*, 173(5), 37–41.
- Valtorta, N.K.; Kanaan, M.; Gilbody, S.; Ronzi, S.; Hanratty, B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: Systematic review and meta-analysis of longitudinal observational studies. *Heart*, 102, 1009–1016.
- Verma, R., & Shah, S. S. (2017). A Comparative Study on the Usage of Locus of Control between Men and Women. *International Journal of Indian Psychology*, 5(1).
- Wallace, M. T., Barry, C. T., Zeigler-Hill, V., & Green, B. A. (2012). Locus of control as a contributing factor in the relation between self-perception and adolescent aggression. *Aggressive Behavior*, 38, 213–221.
- Winsper, C., Lereya, T., Zanarini, M., & Wolke, D. (2012). Involvement in bullying and suicide-related behavior at 11 years: a prospective birth cohort study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 51(3), 271-282.
- Wolke, D., Copeland, W. E., Angold, A., & Costello, E. J. (2013). Impact of bullying in childhood on adult health, wealth, crime, and social outcomes. *Psychological science*, 24(10), 1958-1970.
- Yeager, D. S., (2015). Teaching a lay theory of personality: An intervention that reduces ethnic and gender achievement gaps. *Journal of Personality and Social Psychology*, 65(4), 626-642.