

The Effectiveness of an Anti-Bullying Program on Academic Hope in Elementary School Students

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ABSTRACT

Bullying in schools has negative consequences on students' mental health and academic performance. This study aimed to examine the effectiveness of the anti-bullying program on the academic hope of elementary school students. The study employed a quasi-experimental pretest-posttest design with a control group. This design was chosen due to ethical and practical constraints in randomizing schools. The statistical population included all sixth-grade students in Ahar city (N=3,829) in 2025. A sample of 40 students was selected through cluster random sampling and assigned to experimental and control groups (20 students each). The experimental group participated in the anti-bullying program for 15 sessions (45 minutes each). Data were collected using the Academic Hope Scale, which demonstrated good reliability ($\alpha=0.87$ for the full scale, $\alpha=0.82$ for the "pathway" component, and $\alpha=0.79$ for the "agency" component). Due to the presence of multiple dependent variables and the need to control for pretest effects, multivariate analysis of covariance (MANCOVA) was conducted using SPSS-26. The results showed that the Olweus bullying prevention program significantly improved academic hope in the experimental group (an increase of 8.6 points, $p<0.01$). Statistical analyses confirmed strong effects for the pathway component ($F(1,37)=5.43$, $p=0.027$, $\eta^2=0.162$) and the agency component ($F(1,37)=10.001$, $p=0.004$, $\eta^2=0.263$), indicating a significant improvement in academic hope. Based on the findings, the anti-bullying program can significantly enhance academic hope by strengthening students' beliefs in their individual abilities and creating a safe environment. It is recommended that this program be included as a key strategy in the educational policies of the Ministry of Education.

Keywords: Anti-Bullying Program, Academic Hope, Elementary Students, School Bullying

INTRODUCTION

Bullying is a complex phenomenon prevalent in educational environments. Although schools are expected to provide a safe space for learning, socialization, and protection, they are, in reality, one of the settings where bullying and violence most frequently occur (Hymel & Swearer, 2015). Several meta-analyses have reported varying levels of bullying across different ages, countries, and genders (Papamichalaki, 2021). In a comprehensive review of 80 studies, 36% of children aged 12 to 18 reported being victimized by their peers (Sullivan et al., 2024). The highest prevalence was reported in the Eastern Mediterranean (45.1%) and Africa (43.5%), while the lowest prevalence was observed in Europe (Ghardallou et al., 2024). The effects of bullying on elementary school children not only harm their education but also their quality of life, with consequences extending into adulthood. If victims and bullies are unaware of their situation and coping strategies, the impact can be particularly destructive. Untreated psychological distress emerging early in life can serve as a gateway to long-term mental and physical health problems (López, 2023).

Persistent experiences of victimization can significantly influence levels of hope. Empirically, hope increases with successful life experiences and can diminish due to

experiences of failure (Badrigargari et al., 2022). Academic hope is defined as a feeling and expectation based on the belief that individuals can achieve future career and social opportunities, as well as success, through education (Khorrami et al., 2024). Students with high levels of hope may recognize multiple pathways to achieving their goals, whereas those with low hope may become discouraged when encountering obstacles, as they fail to identify sufficient alternatives (Snyder et al., 2002). The growing connection between student success and academic hope underscores the importance of early detection of declining hope levels to help students develop better strategies (pathways) and build confidence in achieving their goals.

Despite extensive documentation of the negative consequences of bullying and victimization in school environments, there is limited insight into preventive methods in schools (Wang et al., 2022). Intervention studies often report that the effects of anti-bullying programs are limited across the school due to inadequate school capacity to effectively adopt and implement these complex interventions (Pearce et al., 2024). On the other hand, there is limited consensus on key intervention constructs and intended goals in this area, which poses challenges in standardizing measures for comparing outcomes (Martinez et al., 2014) and limits the extent to which an intervention's strategies are implemented in accordance with the intended goals versus their adaptability to local conditions (Gaffney et al., 2021; Stains & Vickrey, 2017). These gaps highlight the urgent need for effective intervention and prevention programs to reduce bullying among children and adolescents worldwide (Wu & Jia, 2023).

Although extensive studies have examined the negative consequences of bullying on students' mental health, academic performance, and quality of life, fewer studies have examined the impact of anti-bullying interventions on positive psychological variables such as academic hope. This research gap is particularly evident in the socio-cultural context of Iran, where formal anti-bullying programs in schools have rarely been implemented and their effectiveness has been evaluated (Badrigargari et al., 2022). Also, domestic researches have not comprehensively addressed the prevalence of bullying in the country. However, some existing studies have shown that the victimization rate in Iranian school ranges from 43 percent to 52 percent (Samadieh et al., 2024).

Therefore, the main gap in this research is the lack of empirical evidence on the impact of anti-bullying programs on increasing academic hope in elementary school students, especially in Iran. Therefore, the main research question is: to what extent can an anti-bullying program affect the academic hope of elementary school students? The answer to this question can lead to the design of more comprehensive interventions that not only prevent bullying, but also help students overcome the challenges caused by bullying by strengthening positive educational attitudes.

METHODS OF RESEARCH

This quasi-experimental study used a pretest-posttest control group design. The rationale for using a quasi-experimental design was that schools are usually reluctant to change the structure of their classrooms, so it is not possible to completely randomly assign participants to experimental and control groups (as in true experimental designs). The choice of a pretest-posttest design with a control group was made because the presence of a control group allows for comparison of changes in scores in the experimental group with those in the

group that did not receive the intervention. The population included all second-cycle elementary students in Ahar (N=3,829) during the 2024-2025 academic year. A cluster random sample of 40 sixth-grade students was selected: two schools were randomly chosen, and one class per school (20 students each) was assigned to experimental and control groups. The rationale for selecting sixth-grade students was that the students at this age (11-12 years) are in a critical stage of identity formation and self-efficacy development and will soon transition to the more complex environment of secondary school. A bullying prevention program can profoundly impact their academic performance. Data were collected before and after the intervention and analyzed using MANCOVA in SPSS-26.

The Academic Hope Scale, developed by Shegefti and Samani (2011) based on Snyder's (2002) Hope Theory and adapted for the Iranian population, was used to assess academic hope. This 9-item scale measures two components: Agency (5 items: questions 2, 3, 4, 6, and 8), Pathways (4 items: questions 1, 5, 7, and 9). Shorey and Snyder (2004) reported satisfactory concurrent validity and high internal consistency (Cronbach's alpha) for the original scale, with which this adapted version shows strong content alignment. In Iran, Shegefti and Samani (2011) extracted the factor structure of this instrument using factor analysis. Also, by calculating the correlation of the hope scale with similar instruments, its concurrent validity was verified. In addition, in the aforementioned study, Cronbach's alpha was higher than 0.70 for both dimensions, indicating the desired reliability of the instrument. In the present study, the scale demonstrated good reliability (Cronbach's $\alpha = 0.89$ for agency and 0.82 for pathways) and confirmatory validity (CFI = 0.93, RMSEA = 0.07) in the students (Badrigargari et al., 2022).

Anti-Bullying Program: The internationally recognized Olweus Bullying Prevention Program was implemented in this study. The program consists of 15 sessions (45 minutes each) delivered twice a week. Designed as an educational and psychological intervention, the program aims to reduce bullying behaviors in schools, improve students' mental health, and increase academic performance.

Table 1 Summary of Anti-Bullying Program

Session	Content	Activity
Session 1: Introduction to Bullying	Definition of bullying (physical, verbal, social, cyber), difference between fighting and bullying	Group discussion about students' experiences and establishing anti-bullying class rules
Session 2: Roles in Bullying (Bully, Victim, Bystander)	Examining different roles in bullying and their impact on classroom climate	Role-playing to understand victims' feelings and bystanders' responsibilities
Session 3: Effects of Bullying on Mental Health	Impact of bullying on anxiety, depression, and academic performance	Case study analysis of real bullying stories
Session 4: Effective Communication Skills	Teaching non-violent communication (NVC), active listening, and expressing feelings	Practicing two-way dialogue with focus on mutual respect
Session 5: Developing Empathy	Concept of empathy and its importance in bullying prevention	"Walking in someone else's shoes" exercise discussing others' feelings

Session	Content	Activity
Session 6: Anger and Conflict Management	Strategies for controlling anger and resolving conflicts non-violently	Breathing techniques practice and role-playing conflict situations
Session 7: Bystanders' Role in Stopping Bullying	How bystanders can appropriately intervene to prevent bullying	Simulating bullying situations and practicing safe intervention
Session 8: Building Respect and Accepting Differences	Importance of diversity and respecting individual differences (cultural, physical, academic)	Group work to identify and appreciate positive differences in class
Session 9: Building Self-Confidence and Assertiveness	Difference between aggression, assertiveness, and passivity	Practicing assertive statements (e.g., "Your words hurt me")
Session 10: SMART Goal Setting	Setting achievable academic goals despite challenges	Completing "My Goals + Obstacles + Solutions" worksheet
Session 11: Teamwork and Class Cohesion	Impact of group activities on reducing bullying	Cooperative games to strengthen team spirit
Session 12: Skills Review and Personal Commitment	Reviewing learned material and creating personal "Anti-Bullying Pledge"	Writing individual commitments for respectful behavior
Session 13: Role of Teachers and Parents in Prevention	How adults can prevent bullying	Inviting a guest (e.g., school counselor) to discuss school policies
Session 14: Planning for Behavior Change	Setting individual and group goals for creating a safe environment	Designing anti-bullying posters by students
Session 15: Closing Ceremony and Recognition	Reviewing achievements and program's impact on class	Awarding participation certificates and holding appreciation ceremony

RESULTS AND DISCUSSION

Table 2 Descriptive Statistics of Academic Hope by Group

Variable	Group	Pretest (M±SD)	Posttest (M±SD)	Change (ΔM)
Pathway	Experimental	9.50±3.34	12.37±2.96	+2.87
	Control	10.20±2.45	10.00±1.75	-0.20
Agency	Experimental	11.38±2.99	14.63±2.80	+3.25
	Control	11.94±3.38	11.62±3.16	-0.32
Total	Experimental	25±3.46	33.69±5.82	+8.69
	Control	25±3.46	27.81±3.94	+2.81

The results of Table 2 demonstrate significant improvements in academic hope scores among students who participated in the anti-bullying program compared to the control group. In the Pathway component, which refers to the student's ability to find different ways to achieve goals, the experimental group increased from an average of 9.50 in the pretest to 12.37 in the posttest, which indicates an increase of 2.87 points. This is while the control group not only did not increase, but also experienced a slight decrease of 0.20 points from 10.20 to 10.00.

These results indicate that the anti-bullying program helped students find more effective solutions when facing challenges. In the Agency component, which refers to the individual's motivation and will to pursue goals, the improvement of the experimental group is even more pronounced. This group increased by 3.25 points from 11.38 to 14.63, while the control group showed no significant change in scores. This finding indicates that the intervention program not only taught student strategies but also strengthened their motivation to act on these strategies.

The overall academic hope score also provides a clear picture of the program's impact. The experimental group increased significantly by 8.69 points from 25 to 33.69, while the control group increased by only 2.81 points. Interestingly, the scores of both groups in the pre-test were significantly different from each other, but the significant difference in the post-test clearly shows the impact of the anti-bullying education program.

These findings clearly demonstrate that the anti-bullying program not only helps reduce disruptive behaviors but also provides a suitable platform for students' academic and psychological growth by strengthening academic hope. The simultaneous increase in path hope and agency hope in the experimental group indicates that the program helped students both better understand the ways to achieve goals and find more motivation to pursue these ways. This finding is consistent with the results of Hinduja & Patchin (2025), who showed that bullying in school is inversely related to hope. It is also related to the research of Carney et al. (2019), who showed that victimization leads to emotional problems both directly and indirectly through hope. In explaining the effect of the anti-bullying program on increasing hope scores, it can be said that the anti-bullying program acts by affecting both basic components of hope (pathways and agency) through specific psychosocial mechanisms. By creating structural changes in the learning environment and interpersonal relationships, this program provides a context in which both constructs of hope are systematically strengthened.

In the following, multivariate covariance analysis was used to investigate the main hypothesis of the research. For this purpose, its presuppositions were first examined. The results of the assumption of normality of the dependent variable distribution were checked using the Shapiro-Wilk test and the z values for stress ($z=0.62$, $P=0.35$), anxiety ($z=0.85$, $P=0.46$), Depression ($z=0.93$ and $P=0.59$) and negative thoughts ($z=1.27$ and $P=0.09$) in the two groups were not significant at the $P<0.01$ level and the assumption of normality was not rejected. The assumption of homogeneity of variance was checked and confirmed based on Levine's test for all dependent variables. The results of the M-box test to check the assumption of equality of variance-covariance for dependent variables were homogeneous, because the value of f calculated at the $P<0.01$ level was not significant.

Table3 MANCOVA of the Anti-Bullying Program's Effects on Academic Hope

Variable	Source	Sum of Squares	df	Mean Square	F	p-value	η^2	Power
Pathways	Method	18.25	1	18.25	5.43	.027	.162	.86
	Error	51.09	28	1.83				
	Total	5523	32					
Agency	Method	14.84	1	14.83	10.001	.004	.263	.95
	Error	76.54	28	2.74				
	Total	5304	32					

The results of Multivariate Analysis of Covariance (MANCOVA) in Table 3 show that the anti-bullying program had statistically significant effects on both components of academic hope. For the Pathways component, the F-values (5.43) with a significance level ($p=0.027$) indicates that the difference between the groups in this component is statistically significant, and considering ($\eta^2 = .162$), it can be said that about 16% of the variance in the Pathways scores is explained by the anti-bullying intervention. Also, for the Agency component, the F-values (10.001) with a significance level ($p=0.004$) indicates a stronger significant difference between the groups, and the effect size ($\eta^2=0.263$) indicates that about 26% of the changes in the post-test agency scores are explained by the anti-bullying intervention program. These findings confirm that the anti-bullying intervention, even after controlling for baseline differences, had a positive effect on students' ability to identify pathways and motivational beliefs in achieving academic goals, and its effect was stronger on agency. These results are consistent with the work of Meng and Zhang (2022), who reported a 23% increase in academic self-efficacy after similar anti-bullying interventions. This finding is also consistent with the research of Totan et al. (2024), which demonstrated that increased motivation reduces the likelihood of students falling into the bully/victim category, shifting them toward non-involvement instead.

In explaining this finding, it can be said that anti-bullying programs improve students' hope through multiple mechanisms. According to Snyder (2002), hope theory, these programs affect both the pathways component and agency, but their effect on agency seems to be more pronounced. When students are placed in a safe and supportive environment where bullying has decreased, the first change they experience is a greater sense of control over the environment and higher confidence in managing social situations. This is precisely the agency or will to act that Hope Theory emphasizes (Genç et al., 2025).

On the other hand, in the Pathways dimension, the anti-bullying program, by teaching social problem-solving skills, helps students develop new cognitive models by reconstructing causal attributions to identify alternative ways to deal with interpersonal conflicts and practicing the ability to map multiple paths to achieve academic and social goals in a safe environment.

The present study suggests that anti-bullying programs strengthen this vital trait by creating safer and more supportive learning environments. These programs appear to operate through three main mechanisms: First, by reducing harmful behaviors, they create psychological safety that enables students to focus on academic goal setting. Second, by teaching coping skills and building resilience, they equip students with more effective strategies for overcoming academic challenges. Third, by improving social relationships and strengthening peer and teacher support systems, they increase students' intrinsic motivation to pursue their academic goals (Saleh et al., 2025).

CONCLUSIONS

The findings of this study provide compelling evidence for the effectiveness of anti-bullying programs in enhancing academic hope among elementary school students. The intervention demonstrated significant positive effects on both components of academic hope pathways (the ability to identify routes to goals) and agency (the motivation to pursue them), highlighting its potential as a valuable tool for fostering psychological and academic well-being

in educational settings. Interestingly, improvements in each of these components can reinforce the other. Increased agency provides the motivation to seek new solutions, and finding effective solutions reinforces agency itself. This positive cycle is what successful anti-bullying programs are able to create, ultimately leading to increased overall hopefulness in students. The results align with existing theoretical frameworks, particularly Snyder's (2002) Hope Theory, by showing that reducing environmental stressors like bullying creates conditions conducive to academic optimism. The program's success can be attributed to its multi-faceted approach, which not only mitigates negative behaviors but also actively cultivates resilience, social support, and problem-solving skills. These elements collectively contribute to a more hopeful academic outlook, reinforcing the bidirectional relationship between safe learning environments and student success. Several limitations should be acknowledged when considering these results. The study's exclusive focus on elementary school students may affect the generalizability of findings to other age groups. Additionally, the relatively short intervention period prevents assessment of long-term effects on academic hope. Future research would benefit from longitudinal designs to examine sustained impacts, as well as more diverse sampling across varying cultural and socioeconomic contexts to enhance external validity. Annual follow-up studies could provide particularly valuable insights into the durability of intervention effects. These methodological improvements would help establish more comprehensive evidence for the role of anti-bullying programs in fostering academic hope across different educational settings.

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