



# The Impact of the Roots Program on Changes in Bullying Behavior and School Climate: A Qualitative Study among Adolescents in Jambi City

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| Track Record<br>Article                                                                                                                                                                                                                                                                                                                                                                                                                                     | Abstract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p>Revised: 31 July 2026<br/>Accepted: 08 September 2026<br/>Published: 26 September 2026</p> <p><b>How to cite :</b><br/>Butar, M. B., Rini, W. N. E., Meinarisa, Rahman, M. A., &amp; Reskiaddin, L. O. (2026). The Impact of the Roots Program on Changes in Bullying Behavior and School Climate: A Qualitative Study among Adolescents in Jambi City. <i>Contagion : Scientific Periodical of Public Health and Coastal Health</i>, 8(3), 140–155.</p> | <p><i>Bullying is a significant public health issue with wide-ranging effects on adolescents' psychological well-being. The Roots Program is one school-based intervention that engages students as change agents in bullying prevention efforts. This study aims to explore the impact of the Roots Program on changes in bullying behavior and school climate among adolescents in Jambi City. This study employed a qualitative case study design and was conducted in two junior high schools (SMP) in Jambi City. A total of 20 participants were involved, consisting of student change agents (10 students), class representatives (6 students), Guidance and Counseling teachers (2 informants), and vice principals (2 informants), who were selected using a criterion sampling approach. Data were collected through focus group discussions (FGDs) and interviews, and analyzed using a thematic analysis with the assistance of NVivo software. The findings revealed that the forms of bullying included verbal bullying, cyberbullying, and SARA-based bullying (bullying related to ethnicity, religion, race, and intergroup differences), which generally occurred in poorly supervised areas such as restrooms and behind classrooms. The implementation of the Roots Program led to several positive changes, including enhanced knowledge and anti-bullying skills, improvements in behavior and social attitudes toward prosocial conduct, strengthened interpersonal relationships and social support, increased feelings of safety and psychological well-being, and a more positive and conducive school climate. Nevertheless, the implementation of the program continued to face several challenges, including time constraints, difficulties in integrating activities into existing school programs, and psychological burdens experienced by students serving as change agents. The Roots Program contributed to a reported reduction in verbal bullying and the development of a more supportive school environment. However, sustained support and systemic integration remain essential to achieve long-term impact. Program sustainability requires ongoing commitment through integration into the curriculum and school policies, reinforcement of peer support mechanisms, and comprehensive changes in school social norms.</i></p> <p><b>Keywords:</b> <i>Adolescent, Bullying, Change Agents, Program Roots, School-Based Intervention</i></p> |

## INTRODUCTION

Bullying is a form of violence commonly experienced by children and adolescents and represents a negative experience with wide-ranging impacts. Its effects are not only experienced by victims but also affect the psychological well-being of perpetrators and individuals who witness such incidents (Abregú-Crespo et al., 2024; Bhatia, 2023). According to UNICEF (2025), bullying is a global phenomenon affecting a significant proportion of students worldwide. Bullying is defined as aggressive behavior influenced by an individual's

developmental stage, social understanding, and interactions with peers. It generally manifests in three forms, namely physical, verbal, and relational bullying, which among adolescents are closely associated with social relationships and moral values (Harsono & Febriyana, 2026). Globally, bullying remains a significant issue in school settings. It is estimated that nearly one in three students (32%) has experienced bullying by peers within the previous month, while a similarly high proportion has reported being victims of physical violence. The Asia-Pacific region, including Southeast Asia, is among the regions with persistently high rates of bullying (Unesco, 2023). Furthermore, the proportion of adolescents aged 13–15 who have experienced bullying at least once in recent months remains high across countries and regions. A study analyzing data from 65 countries found that the prevalence of bullying among adolescents aged 12–17 years reached 32.03% (Man et al., 2022).

In Indonesia, approximately 21% of children aged 13–15 years have experienced bullying (UNICEF, 2025b). Among 40 countries reporting bullying incidents, Indonesia ranks highest in the ASEAN region, with a prevalence of 84% (Davis et al., 2018; Hikmat et al., 2024). The NEW Indonesia Team (2024) reported that 31% of bullying cases occur in educational institutions, with 82% of cases involving male students. Data from UNICEF Indonesia indicate that bullying in schools remains relatively prevalent, affecting 24% of male students and 18% of female students. Furthermore, national evidence suggests that approximately four in ten students aged 15-years experience at least one form of bullying repeatedly each month (UNICEF, 2026).

Recent studies indicate that bullying among students in Indonesia occurs in various forms, including verbal, physical, and relational bullying. Verbal bullying involves teasing, insults, and derogatory name-calling; physical bullying includes behaviors such as hitting, kicking, pushing, pinching, spitting, and hair pulling; while relational bullying involves spreading rumors, social exclusion, and deliberate attempts to isolate victims from their peer groups (Novitasari et al., 2023). These findings underscore bullying as a critical public health issue requiring serious attention. The high prevalence of bullying confirms that it remains a significant health and social problem requiring systematic prevention strategies in school settings, including through peer-based interventions such as the Roots Program.

Furthermore, the impact of bullying on adolescents' mental health is not limited to victims but also affects perpetrators and bystanders. School bullying is associated with a range of negative consequences that can seriously undermine adolescents' psychological well-being. These effects extend beyond those directly involved, also affecting individuals who witness bullying incidents. In the short term, bullying can impair academic performance, trigger test

anxiety, and contribute to depression and substance abuse. Over the long term, its effects can be profound and enduring, influencing mental health outcomes throughout the lifespan (Han et al., 2025).

The power imbalance inherent in bullying situations often makes it difficult for victims to resist or defend themselves, leading to feelings of helplessness and frustration (Potard et al., 2022). The mental health consequences of bullying among adolescents are substantial, and include both short- and long-term effects, such as anxiety, depression, substance abuse, and suicidal behavior (Han et al., 2025). According to previous studies, bullying among children and adolescents is associated with a range of adverse outcomes, including depression, non-suicidal self-injury, sleep disturbances, reduced health-related quality of life, lower rates of secondary school completion, and an increased risk of future mental health problems.

Bullying arises from the interaction of multiple factors, including individual characteristics, family dynamics, school environment, and broader social influences. Individual factors are related to psychological conditions and personal traits, whereas social and school environmental factors involve peer relationships and student interactions. Additionally, family influences and a lack of awareness regarding the consequences of bullying may further contribute to the persistence of such behaviors (Al-ghawi et al., 2026; Han et al., 2025; Jordânia et al., 2024).

One of the emerging intervention strategies to address this issue is the Roots Program. The Roots Program is a global initiative for preventing peer violence that focuses on fostering a safe school climate by strengthening the role of students as agents of change. However, its implementation requires adaptation to local contexts at both the national and regional levels. Students are actively involved in designing and producing various campaign materials, such as printed media, posters, photographs, and educational resources containing anti-violence messages, while also organizing collective activities, including festivals or thematic campaigns (United Nations Children's Fund (UNICEF) Indonesia, 2017).

The Roots Program has been implemented in several schools across Indonesia. In practice, a number of challenges have been identified, including inadequate regeneration of teacher facilitators, limited interaction with program implementers, parental skepticism regarding students' roles as change agents, difficulties in scheduling training sessions, low student awareness of the harmful effects of bullying, and insufficient funding to support program activities (Istighfaria & Listyaningsih, 2024). Nevertheless, the program has demonstrated meaningful positive outcomes, particularly a reduction in the acceptance of

bullying behaviors, accompanied by increased student engagement as bystanders who demonstrate prosocial behavior (Unicef Indonesia, 2018).

Jambi City is also among the regions where bullying cases continue to occur. The Office of Community Empowerment, Women, and Child Protection (DPMPPA) of Jambi City recorded 31 bullying cases in 2024 (IMC News.ID, 2024). Several bullying incidents involving children and adolescents in Jambi have been characterized by verbal abuse, including the use of inappropriate and offensive language. Such behaviors are intended to demean peers, often by emphasizing individual differences and attaching negative labels that question their acceptance within the school environment (Erita & Musyaffa, 2026; Nabila et al., 2024).

In response, some schools have implemented the Roots Program as a bullying prevention initiative. However, research examining the effectiveness of the program and its impact on behavioral changes among adolescents remains limited. The context of Jambi City is particularly important because a school's social and environmental characteristics may influence both the acceptance and effectiveness of peer-based interventions. This study contributes to the existing literature by documenting the implementation of the Roots Program in a regional context that has received little scholarly attention, and by examining how socio-ecological factors facilitate or hinder the process of change.

This study was conducted in both "*Sekolah Penggerak*" (Driving Schools) and non-*Sekolah Penggerak* schools to explore the implementation of the Roots Program, which has been adapted to school contexts with varying levels of institutional readiness. Comparing these two types of schools is expected to provide a more comprehensive understanding of how school environment characteristics influence program implementation and to enhance the transferability of the findings across different school setting in Indonesia. Based on this research gap, the present study aims to explore the implementation of the Roots Program for bullying prevention in junior high schools in Jambi City. Specifically, this study seeks to answer three main questions: (1) what forms of bullying most frequently occur in the school environment, (2) how have bullying behavior and school climate changed following the implementation of the Roots Program, and (3) what challenges hinder the implementation of the Roots Program in creating a safe and supportive school environment.

## METHOD

This study employed a qualitative case study design to explore in depth the impact of the Roots Program on changes in adolescent behavior, particularly in the context of bullying prevention. The study was conducted in two junior high schools in Jambi City: one "*Sekolah*

*Penggerak*” (driving school) and one non-*Sekolah Penggerak*. The *Sekolah Penggerak* (driving school) was represented by public junior high school (SMPN) X, while the non-*Sekolah Penggerak* was represented by SMPN Y. The selection of these two schools aimed to examine the program’s implementation and impact across different educational contexts.

Students serving as change agents had participated in 10 briefing and training sessions conducted over five days. Each session lasted approximately 60-90 minutes and was facilitated by a moderator, assisted by a note-taker responsible for documenting the discussion and recording participants' nonverbal responses. Class representatives were students who had experienced the effects of the Roots Program implemented in their schools. In addition, the participants included two Guidance and Counseling (BK) teachers and two vice principals, who were interviewed for approximately 40-60 minutes each to provide insights into the implementation of the program at the school level.

Sampling were selected purposively using a criterion sampling approach. The sample consisted of 16 students, including eight students from the *Sekolah Penggerak* school and eight students from the non *Sekolah Penggerak* school. These participants comprised both student change agents and class representatives and were selected based on predetermined criteria. The inclusion criteria were: (1) being aged 13 to 15 years, (2) serving as a change agent in the Roots Program, (3) possessing good communication skills, and (4) being willing to participate throughout the research process.

Data were collected through focus group discussions (FGDs) using semi-structured question guides developed based on the research objectives. The discussion guide was organized thematically and sequentially to explore behavioral changes, social dynamics, and psychosocial impacts following the intervention. The FGDs also examined students’ experiences participating in the adapted Roots Program, perceptions of the bullying conditions at school before and after the intervention, changes in knowledge and attitudes regarding bullying and mental health, experiences of providing or receiving peer support, as well as perceived benefits, challenges, and recommendations for program improvement. The FGD involving student change agents and class representatives was conducted in a single discussion session lasting 60–90 minutes. Both groups were combined into one discussion because of limitations in students’ availability and the time allocated by the school for research activities.

Data analysis was conducted using NVivo software to facilitate the organization, management, and coding of qualitative data. Data obtained from the focus group discussions (FGDs) were analyzed using a thematic analysis approach. The analysis involved repeated reading of transcripts, initial coding, clustering codes into potential themes, reviewing and

refining themes, and finally identifying themes representing that represented the main patterns in the data in accordance with the study objectives (Braun & Clarke, 2006). The coding process was conducted independently by the principal investigator and the fifth author, both of whom have experience in qualitative research and hold certifications in qualitative research methods. The coding results were subsequently discussed to achieve consensus and ensure consistency in data interpretation.

The trustworthiness of the study was ensured through source triangulation by comparing data obtained from students with information gathered from interviews with Guidance and Counseling (BK) teachers and vice principals. Differences in perspectives were examined and discussed among the researchers until consensus was reached, thereby enhancing the credibility and trustworthiness of the research findings. In addition, the research process was systematically documented to ensure consistency (dependability), while objectivity (confirmability) was maintained by grounding interpretations in empirical data and direct participant quotations. Ethical approval for this study was obtained from the Ministry of Health, Jambi Health Polytechnic (Politeknik Kesehatan Jambi), No. LB.02.06/2/1150/2025. Written informed consent was obtained from parents or guardians prior to data collection. Only students whose parents or guardians had provided consent were included in this study.

## RESULTS

### Characteristics of Informants

The participants came from various stakeholder groups within the school environment, including school management, guidance and counseling teachers, student change agents, and class representatives. The majority of student participants were female, aged between 12 and 14 years, with an average age of approximately 13 years, representing students from grades 7 to 9 (Table 1).

**Table 1. Characteristics of Informants**

| No | Informant Code | Gender | Age | Grade | Role                            | Type of School               |
|----|----------------|--------|-----|-------|---------------------------------|------------------------------|
| 1  | Informant SW   | Male   | 52  | -     | Vice principal                  | <i>Sekolah Penggerak</i>     |
| 2  | Informant ST   | Female | 54  | -     | Vice principal                  | <i>Non-Sekolah Penggerak</i> |
| 3  | Informant YL   | Female | 39  | -     | Guidance and Counseling Teacher | <i>Sekolah Penggerak</i>     |
| 4  | Informant AN   | Female | 59  | -     | Guidance and Counseling Teacher | <i>Non Sekolah Penggerak</i> |
| 5  | Informant KS   | Female | 12  | 7     | Student Change Agent            | <i>Sekolah Penggerak</i>     |
| 6  | Informant AR   | Female | 13  | 8     | Student Change Agent            | <i>Sekolah Penggerak</i>     |
| 7  | Informant NK   | Female | 14  | 9     | Student Change Agent            | <i>Sekolah Penggerak</i>     |
| 8  | Informant MD   | Female | 13  | 8     | Student Change Agent            | <i>Sekolah Penggerak</i>     |

| No | Informant Code | Gender | Age | Grade | Role                         | Type of School               |
|----|----------------|--------|-----|-------|------------------------------|------------------------------|
| 9  | Informant NP   | Female | 12  | 7     | Student Change Agent         | <i>Sekolah Penggerak</i>     |
| 10 | Informant VN   | Male   | 12  | 7     | Class Representative Student | <i>Sekolah Penggerak</i>     |
| 11 | Informant DH   | Female | 13  | 8     | Class Representative Student | <i>Sekolah Penggerak</i>     |
| 12 | Informant QN   | Female | 14  | 9     | Class Representative Student | <i>Sekolah Penggerak</i>     |
| 13 | Informant NT   | Female | 12  | 7     | Class Representative Student | <i>Non Sekolah Penggerak</i> |
| 14 | Informant ZF   | Male   | 13  | 8     | Class Representative Student | <i>Non Sekolah Penggerak</i> |
| 15 | Informant ST   | Male   | 14  | 9     | Class Representative Student | <i>Non Sekolah Penggerak</i> |
| 16 | Informant AZ   | Male   | 12  | 7     | Student Change Agent         | <i>Non Sekolah Penggerak</i> |
| 17 | Informant NJ   | Female | 14  | 9     | Student Change Agent         | <i>Non Sekolah Penggerak</i> |
| 18 | Informant IZ   | Female | 13  | 8     | Student Change Agent         | <i>Non Sekolah Penggerak</i> |
| 19 | Informant IN   | Female | 12  | 8     | Student Change Agent         | <i>Non Sekolah Penggerak</i> |
| 20 | Informant AS   | Female | 13  | 8     | Student Change Agent         | <i>Non Sekolah Penggerak</i> |

### Forms of Bullying Among Adolescents

Bullying behaviors commonly exhibited by adolescents can be classified into several types. First, verbal bullying includes various behaviors such as mocking parents' names, ridiculing physical appearance, using racist language, making inappropriate jokes, insulting grandparents, repeated teasing, highlighting physical flaws, and jeering at peers. Second, cyberbullying involves actions such as spreading misinformation and sharing others' photos without consent or with the intention of humiliating them. Third, identity based bullying related to ethnicity, religion, race, and intergroup differences is reflected in discriminatory attitudes and the use of racist language. These bullying behaviors generally occur in areas with minimal supervision, such as restrooms and behind classrooms

*"Currently, what happens is mostly among male students, about 30%, who still use jokes like mocking parents' names, or even now grandparents (Informant QN)."*

*"It's spread more through hoax news, photos are shared (Informant IZ)."*

*"Most of what we have here is verbal; utterances that are sometimes racist, tribalist, or physical. Even if it's oral, it's uncomfortable to hear. Physical bullying is rarely found here (Informant SW)."*

In addition, bullying behavior carried out by students generally occurs in areas with minimal supervision, such as restrooms and the back of classrooms.

*"Usually in the toilet" (Informant DH).*

*"In the back of the class" (Informant QN).*

## **Changes in Bullying Behavior and School Climate in Bullying Prevention Through the Roots Program**

The results of the analysis show that program implementation produced changes in three domains: individual, social, and environmental aspects. Changes in the individual aspect were marked by increased cognitive capacity and anti-bullying skills, as well as changes in participants' behavior and social attitudes. In the social aspect, the program contributed to strengthening relationships and social support, as well as increasing feelings of safety and psychological well-being. Meanwhile, in the environmental aspect, the program encouraged improvements in school climate and environment. These three domains were identified into five main themes: (1) increased cognitive capacity and anti-bullying skills, (2) changes in behavior and social attitudes, (3) strengthened relationships and social support, (4) increased feelings of safety and psychological well-being, and (5) improved school climate and environment.

### **Improved Cognitive Capacity and Anti Bullying Skills**

Participants reported increased understanding of bullying as well as practical skills in responding to bullying situations. Students were not only able to identify different forms of bullying but also demonstrated the ability to support victims, respond appropriately to perpetrators, and take suitable follow up actions. In addition, teachers noted that the program enhanced students' confidence in expressing their feelings and navigating their daily lives. This finding suggests that the program contributed to improving students' social and emotional literacy.

*"Through my experience as an agent, I gained many friends, met new people, and learned how to respond to bullying situations, what happens to victims, and what happens to perpetrators"* (Informant AS).

*"Yes, the students have become more confident. In what sense? In living their daily lives."* (Informant YL).

### **Changes in Behavior and Social Attitudes**

Adolescents reported noticeable changes in bullying behavior. Acts such as verbal teasing, insulting parents, and cyberbullying have begun to decrease, and some students who were previously perpetrators no longer engage in such behaviors, although a few cases still persist. Additionally, there has been an increase in prosocial attitudes, such as mutual respect among peers and greater awareness of avoiding bullying. These findings indicate a shift in social norms among students following the program implementation.

*"Bullying still occurs in the school environment, but it has started to decrease, and we can see the impact of the Roots Day activities we conducted. The change agents have begun carrying out*

*their roles well, such as reminding their friends not to bully one another. Even small forms of bullying, like mocking parents' names, have decreased, although they still exist" (Informant NP). "Yes, they seem more caring, greeting their friends and teachers more often" (Informant YL).*

### **Strengthening Relationships and Social Support**

The program also strengthened interpersonal relationships, both among students and between students and teachers. Participants described closer relationships, increased togetherness, and the presence of a safe space to share personal concerns with peers. This social support plays an important role in preventing and addressing bullying.

*"The quality of friendships is definitely better now. Previously, relationships were quite toxic, with behaviors such as mocking parents' names and other negative interactions. Now, even though joking may feel a bit awkward at first, because it used to be considered normal, saying such things feels uncomfortable. So the way we joke is a bit more restrained, but over time it will become more normalized in a positive way and the impact will be good" (Informant QN,).*

### **Enhanced Sense of Safety and Psychological Well Being**

Most participants reported an increased sense of safety and comfort within the school environment. The school is no longer perceived as a threatening place but rather as a supportive setting that promotes students' psychological well being

*"I feel safer because we now know how to handle or respond to bullying if it happens at school. I just feel safer" (Informant NJ).*

### **Improvement in School Climate and Environment**

Changes were also observed at the broader school level, particularly in the overall school climate. The school was described as more friendly, peaceful, harmonious, as well as cleaner and more enjoyable. This indicates that the program's impact extends beyond individuals to the wider social environment of the school.

*"The school has become more peaceful after the ROOTS Day activities, and peer relationships have grown stronger" (Informant ZF).*

### **Challenges of the Roots Program in the School Setting**

Barriers in the implementation of the Roots Program reflect both structural and psychosocial challenges within the school environment. From an implementation perspective, time constraints remain a key issue, particularly in aligning the program with academic schedules and other classroom activities. In addition, limited duration of program activities posed challenges that could affect the intensity and sustainability of the intervention. From a psychological perspective, some students, especially those serving as change agents, occasionally experience fear and emotional instability, which can hinder their active participation. Furthermore, the emergence of negative labelling from peers, such as being perceived as "weak," "pretending to be good," or "self-righteous," indicates that social norms among students do not yet fully support anti bullying behaviours. Therefore, the successful

implementation of the Roots Program depends not only on the design of the intervention but also on support from the social environment and the development of an inclusive and supportive school culture.

*“The challenge might be that we’re running up against time, you know. Well, it’s hard for the kids to adjust when it conflicts with their study time, Ma’am. Sometimes the kids want to join the activities, but their schedules clash with exams especially since there were midterm exams just yesterday. Plus, our activities have been particularly busy over the past few months. That’s right, that’s right. Even though the preparation activities wrapped up in August, there are still other preparations like that, right”. (Informant AN).*

*“The challenge is that people who don’t like the agent of change might resent it. Because in their minds, they might think, “What is this? It’s so unclear.” Because they just don’t like it.” (Informant MD).*

*Acting all high and mighty, and then we get called “cupu (weak).” Yeah, there’s that term, “cupu. (weak)” They call us “cupu (weak).” Well, that’s the challenge. For him to act, to enforce it. So sometimes he’s already reported, “Ma’am, don’t tell us, Ma’am, okay.” Well, like that. Whereas we have this nature: “Yes, dear, that’s our motivation once it’s from here, it means we’re applying the principle of confidentiality,” like that, protected. (Informant AN).*

## DISCUSSION

The research findings identified three main forms of bullying: verbal bullying, cyberbullying, and identity based (SARA) bullying. Verbal bullying was the most prevalent form, while cyberbullying was characterized by the dissemination of information or photographs without consent. SARA-based bullying manifested through discriminatory behavior and the use of remarks targeting ethnicity, religion, race, or other social identities. These findings represent the complexity of bullying as a phenomenon that extends beyond face-to-face interactions into digital spaces and dimensions of social identity.

Furthermore, the implementation of the Roots Program in this study demonstrated positive effects in reducing bullying behaviors, particularly verbal teasing, although such behaviors were not completely eliminated. This finding is consistent with previous evidence indicating that digital-based interventions can help reduce bullying and cyberbullying among children and adolescents (Ramírez-saiz et al., 2023). In addition, Yosep et al. (2026) reported that the Roots Program is associated with increased empathy and reductions in bullying behavior. This may be attributed to the capacity of peer-led interventions to foster a more supportive, prosocial, and safe school climate. Peer-led mental health interventions have shown considerable promise in improving adolescent mental health outcomes through education, psychoeducation, counseling, psychotherapy, and peer support. However, their effectiveness depends largely on the quality of training, the availability of supervision, cultural appropriateness, and institutional support (Chow et al., 2025).

This study also highlights that the Roots Program contributes to changes at the individual, social, and environmental levels. At the individual level, increased cognitive capacity and anti bullying skills emerged as key findings. Students were not only able to identify different forms of bullying but also demonstrated responsive abilities in handling bullying situations, including providing support to victims and taking preventive actions. These findings are consistent with evidence that school-based anti-bullying interventions can contribute to changes in students' individual behaviors and characteristics, including their ability to respond to and cope with bullying situations (Hensums et al., 2022). According to National Academies of Sciences Engineering and Medicine (2016), universal bullying prevention programs generally focus on strengthening students' skills as a primary strategy to reduce bullying behavior. These programs do not only target at risk individuals but involve all students, aiming to build social and emotional competencies such as empathy, assertive communication, emotional regulation, and constructive conflict resolution skills.

Various school-based bullying prevention programs have demonstrated effectiveness in reducing bullying and enhancing adolescent well-being, whether through interventions that directly target bullying or through approaches that strengthen emotional regulation, social-emotional competence, conflict resolution, resilience, and prosocial behavior. Programs that promote prosocial behavior also appear to offer broader benefits for school climate, mental health, healthy lifestyles, and social-emotional skills (González Moreno & Molero Jurado, 2024). In addition, bullying prevention programs have been shown to increase awareness among all members of the school community regarding bullying issues, which in turn contributes to improvements in school climate and reductions in conflict and bullying incidents (Sainz & Martín-moya, 2023).

At the social level, this study identified significant changes in patterns of interaction among students. Increased empathy, mutual respect, and the emergence of prosocial behaviors reflect the program's success in shifting group norms toward a more inclusive culture. Social skills constitute an important component in bullying prevention, as they can help students build positive relationships, enhance prosocial behavior, and foster a safer and more supportive school environment (Cipriano et al., 2023; González Moreno & Molero Jurado, 2024). Anti bullying interventions are generally based on the assumption that understanding the experience of being a victim can enhance individuals' empathy toward victims (Trach et al., 2023). Students with higher levels of empathy tend to be more active in supporting or defending victims in bullying situations, whereas those with lower empathy are more likely to reinforce bullying behavior or remain passive bystanders (Hikmat et al., 2024; Lee et al., 2021).

Furthermore, strengthening social relationships between students and teachers is an important factor in creating a supportive environment. Consistent and visible teacher intervention plays a key role in reducing bullying behavior (Fernández et al., 2025). Teacher involvement functions not only as facilitation but also as an authoritative presence capable of shaping norms and legitimizing anti bullying behaviors. This finding supports a social ecological perspective, which positions bullying At the environmental level, improvements in school climate represent one of the most strategic outcomes of the program implementation. Schools that were previously perceived as environments vulnerable to bullying, particularly in areas such as restrooms and behind classrooms, have undergone positive transformation. Through the Roots Program, students now perceive the school as a safer, more harmonious, and inclusive environment.

Comprehensive school based approaches to bullying prevention emphasize the importance of institutional commitment in creating a safe and conducive learning environment. This includes the implementation of clear anti bullying policies, strengthened supervision in high risk areas, structured educational activities, and the development of a school culture that consistently rejects all forms of bullying (Gaffney et al., 2021; Harsono & Febriyana, 2026).

This study indicates that the implementation of the program still faces several challenges, both from structural and social aspects. Time constraints and the need to align program activities with academic schedules can hinder the effectiveness of the intervention. From a social perspective, resistance is still evident, including negative stigma and verbal bullying directed at student change agents. This demonstrates that norms supporting bullying have not yet been fully transformed. Therefore, the success of the program depends not only on the design of the intervention but also on the readiness of the school culture. Previous studies have similarly shown that the implementation of anti bullying programs faces multiple barriers across structural and social dimensions. The barriers identified include time constraints, low prioritization of mental health issues on the school agenda, and logistical constraints, which represent the main obstacles to program implementation in schools (Schäfer et al., 2025).

In addition, implementation barriers may be related to limited resources, weaknesses in program organization, unclear policies and division of tasks, limited financial resources and decision-making processes, as well as shortcomings in education, monitoring, and evaluation (Baghian et al., 2023). Bystanders often remain passive out of fear of personal consequences, whether retaliation, social exclusion, loss of status, or the risks that come with being visibly involved. This tendency is compounded by a lack of trust and perceived safety in existing systems or reporting channels, which means pressures toward conformity, or even personal

opportunism, tend to outweigh the courage needed to act openly (Borthakur et al., 2026). This dynamic represents a significant barrier to school-based anti-bullying intervention programs.

This study has several limitations. First, the relatively small number of participants and their recruitment from only two schools in Jambi City may limit the diversity of perspectives obtained. Second, the focus group discussions combined two groups, namely student change agents and class representatives, which led to the dominance of participation from the change agent group. As a result, the perspectives of class representatives may not have been optimally captured. This condition may introduce bias in the discussion outcomes and reduce the representation of participants' experiences as a whole. In addition, the relatively short duration of the study limits the ability to capture the long term sustainability of the Roots Program's impact on bullying behavior and school climate. Therefore, future research is recommended to employ mixed method or longitudinal designs with broader geographical coverage in order to obtain a more comprehensive understanding.

## CONCLUSION

This research provides an in depth, contextual understanding of the mechanisms of change in the cognitive, social, and environmental aspects through the Roots Program, an understanding not easily obtained through quantitative surveys alone, particularly regarding bullying prevention strategies specifically, reducing bullying behavior and improving school climate through changes at three main levels: individual, social, and environmental. However, its effectiveness depends heavily on synergy among the individual, the social environment, and the education system as a whole. The program has been successful in enhancing students' cognitive capacity, promoting prosocial behaviours, strengthening social relationships, and fostering a safer and more inclusive school environment. Nevertheless, the changes achieved remain partial and continue to face various challenges, both structural and psychosocial.

Therefore, long-term commitment and a systemic approach are needed to ensure the sustainability of the program's impact. Integrating the program into school policy, strengthening social support through a structured peer support system for change agents, providing dedicated time allocation within the curriculum, and implementing comprehensive anti-bullying policies are important strategies for reinforcing institutional support and transforming cultural norms, thereby creating an educational environment that is safe and free from bullying. Future research should employ a longitudinal design with a mixed methods approach to evaluate the long-term behavioral impact of this program and to test

implementation strategies capable of reducing the psychosocial challenges faced by student change agents.

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