

PEER ENVIRONMENT AS A SOCIAL FACTOR IN HIGH SCHOOL STUDENTS LEARNING MOTIVATION

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Abstract: Learning motivation among high school students develops through interactions between individual and social factors, with peer relationships becoming particularly salient during adolescence. This study systematically synthesizes empirical evidence concerning the characteristics of peer-environment research, the mechanisms through which peer relationships support learning motivation, and the factors explaining variations across findings. A Systematic Literature Review with narrative-thematic synthesis was conducted using 22 verified empirical studies involving high school and relevant secondary-school populations. The findings reveal a broadly consistent positive association between supportive peer environments and students' learning motivation. Peer relationships operate through emotional support, academic assistance, a sense of belonging, behavioral modeling, positive academic norms, collaborative learning, academic self-concept, and self-efficacy. The strength of these relationships varies according to friendship quality, individual student characteristics, teacher and family support, subject area, school climate, cultural setting, and research design. The review indicates that the mere presence of peers is insufficient; the quality and academic orientation of peer interactions are more consequential. Schools can therefore strengthen learning motivation through structured cooperative learning, peer mentoring, peer-assisted learning, and inclusive classroom norms that transform peer relationships into constructive educational resources.

Keywords: Peer environment; peer relationships; learning motivation; high school students; peer social support; academic motivation; systematic literature review.



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INTRODUCTION

Learning motivation is an essential element in the continuity of the educational process because it determines the direction, intensity, persistence, and willingness of students to engage in academic activities (Chhorn, 2025). Students with high motivation tend to show better persistence in completing tasks, seeking help when experiencing difficulties, and maintaining effort when facing challenging material (Milieva, 2025). At the high school level, the formation of motivation becomes increasingly complex because students are in adolescence when the need for social acceptance, independence, and identity begins to develop strongly (Sofyan et al., 2025). The student learning environment at this phase cannot be understood solely through teacher-student relationships. Relationships with peers assume an increasingly important position because most school activities take place together with a relatively peer-aged group (Schieghart,

2022). The influence of peer relationships on student motivation is significant, as positive interactions can enhance academic engagement and persistence in challenging tasks (Farokha & Pradikto, 2025).

The social constructivist perspective explains that the development of knowledge takes place through social interaction and joint activities (Hayati et al., 2025). Vygotsky (1978) places interaction as an important part of cognitive development because individuals can acquire assistance, strategies, language, and ways of thinking through involvement with others. In school life, peers can provide a more egalitarian discussion space compared to student-adult relationships. Students can explain material to each other, ask questions without formal pressure, exchange learning strategies, compare understanding, and provide support when experiencing difficulties (Tenenbaum et al., 2020). Interactions of this kind allow the peer environment to function as a source of learning experiences, rather than merely as a social environment.

These relationships can also be explained through Self-Determination Theory. Ryan and Deci (2020) explain that motivation develops more adaptively when basic needs for competence, autonomy, and relatedness can be fulfilled. Friendships that provide a sense of acceptance can support the need for relatedness, while assistance and feedback from friends can increase feelings of competence. When students are in groups that value academic effort, learning activities can acquire a more positive social meaning (Lu, 2025). Conversely, groups that consider learning as an uninteresting or valueless activity can create normative pressure that weakens motivation.

A number of Indonesian studies have found a positive relationship between peer support and learning motivation. Isrofi and Affandi (2025) found a significant positive correlation between peer social support and learning motivation in 260 high school students in Sidoarjo. Putri and Setiawan (2025) also found a positive relationship among students of SMA Pangudi Luhur St. Louis IX Sedayu. Gerungan and Tondatuon (2022) obtained a similar pattern in SMA Unklab Airmadidi students, while Kawonal et al. (2025) showed a significant relationship between peer association and learning motivation in SMA Advent Unklab students. The common direction of findings across different schools and regions indicates a fairly consistent empirical basis that social relationships among students are related to academic motivation.

Other evidence shows that this relationship can appear in various forms. Elinggrawati et al. (2023) found the influence of the peer environment on the mathematics learning motivation of grade XI students at SMA Negeri 4 Payakumbuh. Febianti et al. (2026) found that peers contribute to Economics learning motivation. Amelia et al. (2024) found a linkage between peer interaction and Islamic Religious Education learning motivation in students at SMK Negeri 3 Malang. Said et al. (2025) obtained a similar relationship in grade X students at MA Pesantren Pondok Madinah Makassar. The variation in subjects and school types indicates that peers operate within different educational conditions.

International literature supports the relevance of peers during adolescence. Schimmelpfennig (2025), through a longitudinal study of 779 students in Germany, demonstrated a reciprocal relationship between peer relationship quality and motivational regulation during adolescence. Liu et al. (2022) found that perceptions of peer relationships relate to academic interest and self-concept, which subsequently relate to achievement and well-being at school. Li et al. (2020) showed that motivation acts as a mediator in the relationship between peer relationships and scientific literacy among 596

adolescents in China. These findings show that the peer environment has the potential to influence motivational processes before ultimately relating to academic achievement.

Although most studies show a positive direction, the magnitude of the relationship is not uniform. Isrofi and Affandi (2025), for example, obtained a statistically significant but relatively weak positive relationship. Nurkamilah and Hashuna (2026) found that peer social support explains approximately 6.9% of the variance in learning motivation among grade X students at MAN 2 Garut. These findings indicate that the peer environment is one factor, but it cannot be used as a single explanation for student motivation. Maghfirah et al. (2023) found that motivation is simultaneously influenced by self-efficacy, parental attention, and peer social support. These findings highlight the need to understand friendships as part of a broader system of social and personal factors.

Other issues lie in conceptualization differences. Research uses terms such as peer social support, peer interaction, peer association, peer environment, peer relationships, up to peer group influence. Some measure motivation directly, while other studies use academic interest, motivational regulation, self-concept, engagement, or academic outcomes as part of the mechanism. These differences make conclusions regarding the "role of the peer environment" insufficient to obtain simply by counting the number of studies finding significant relationships. A synthesis is needed regarding what forms of social relationships support motivation and through what processes such influence works.

A systematic review is required so that scattered findings can be compared more structurally. This study uses a Systematic Literature Review to synthesize national and international research concerning the peer environment and student learning motivation at the high school level and relevant secondary education. The synthesis is directed toward research characteristics, relationship mechanisms, and factors explaining variations in findings.

This study addresses three research questions:

RQ1: What are the characteristics and trends of research findings concerning the peer environment and high school students' learning motivation?

RQ2: Through what mechanisms does the peer environment support the enhancement of high school students' learning motivation?

RQ3: What factors explain the variation in the strength of the relationship between the peer environment and learning motivation, and what are the implications for high school learning?

METHOD

RESEARCH METHOD This study uses a Systematic Literature Review approach with narrative-thematic synthesis. SLR is used to identify, evaluate, compare, and synthesize research results related to the peer environment and student learning motivation. The review procedure follows the principles of systematic review in education and social sciences that emphasize transparency of research questions, search strategies, eligibility criteria, data extraction, and synthesis. Reporting follows the PRISMA 2020 guidelines (Page et al., 2021), while the formulation of the review process considers Snyder's (2019) guide regarding the use of literature reviews as a research method.

Searches were directed at Google Scholar, Garuda, national journal portals, DOIs, and international publisher pages. Keyword combinations included "lingkungan teman sebaya", "dukungan sosial teman sebaya", "interaksi teman sebaya", "peer relationship",

"peer social support", "peer influence", "learning motivation", "academic motivation", "secondary school", "high school", and equivalent combinations. National studies were focused primarily on 2021–2026 publications, while one international study from 2020 was retained because it provided strong mechanistic evidence regarding the relationship between peer relationships, motivation, self-efficacy, and academic literacy.

Inclusion criteria encompassed: (1) empirical research articles; (2) having traceable bibliographic identities in journals, publishers, DOIs, or academic indexes; (3) discussing peers, social support, interaction, or friendship relationships; (4) discussing learning motivation, academic motivation, or constructs that directly explain motivational mechanisms; and (5) using middle school-aged participants or relevant educational populations as support for mechanisms. Articles discussing only achievement without relevant social or motivational constructs, popular articles, theses, dissertations, unverified sources, and duplicates were excluded from the main corpus. The final corpus of this review consists of 22 empirical studies whose publication identities have been tracked.

Data extraction covered authors, year, country or region, participants, educational level, research method, friendship constructs, motivational constructs, and main findings. Subsequently, studies were grouped according to three analytical needs. The first group was used to map research characteristics. The second group was used to identify mechanisms such as emotional support, academic assistance, group norms, sense of belonging, self-concept, self-efficacy, and collaborative learning. The third group was used to explain the heterogeneity of findings based on student characteristics, schools, subjects, instruments, and research designs.

RESULTS AND DISCUSSION

The results of the literature selection yielded 22 relevant empirical studies to be analyzed in this review. These studies cover national and international research discussing the peer environment through several constructs, such as peer social support, peer interaction, peer association, peer relationships, and peer group influence. The most frequently examined outcome variables are learning motivation and academic motivation, while several studies also position interest, academic self-concept, engagement, literacy, and learning achievement as part of the mechanisms related to motivation. Most studies use correlational and survey quantitative approaches, whereas several international studies use longitudinal designs, structural equation modeling, moderated mediation, and quasi-experiments. The diversity of these approaches allows this review not only to identify the direction of the relationship between the peer environment and learning motivation, but also to examine the mechanisms explaining this relationship and the factors causing differences in the strength of findings across publications.

Overall, the literature shows a relatively consistent trend that a supportive peer environment is associated with better learning motivation. Emotional support, academic assistance, a sense of acceptance within the group, learning behavior modeling, the establishment of academic norms, self-efficacy, and collaborative activities appear repeatedly as mechanisms explaining this relationship. Nevertheless, the magnitude of peer contribution is not identical across every study. Differences in student characteristics, friendship relationship quality, subject matter scope, teacher and family

support, school conditions, and research designs affect the strength of the relationships found. So that the characteristics of each study can be compared systematically before conducting thematic synthesis, a summary of the 22 studies is presented in Table 1.

Table 1. Synthesis of 22 Empirical Studies

No.	Study	Object and Method	Main Findings
1	Isrofi & Affandi (2025)	260 high school students in Sidoarjo; correlational	Peer social support has a significant positive relationship with learning motivation, but the correlation strength is relatively small.
2	Putri & Setiawan (2025)	96 grade X students at SMA Pangudi Luhur St. Louis IX Sedayu; correlational	Peer social support correlates positively with learning motivation ($r = 0.454$).
3	Gerungan & Tondatuon (2022)	108 students at SMA Unklab Airmadidi; correlational	Peer social support is positively related to students' learning motivation.
4	Kawonal et al. (2025)	Grade XI students at SMA Advent Unklab; quantitative	Peer association and learning motivation are both high; there is a moderate positive correlation ($r = 0.471$).
5	Elinggrawati et al. (2023)	Grade XI students at SMA Negeri 4 Payakumbuh	The peer environment has a significant effect on mathematics learning motivation; determination contribution is around 36.43%.
6	Febianti et al. (2026)	100 grade X students at SMAN 3 Kuningan; survey	Interaction with peers at school and in the social environment is related to Economics learning motivation.
7	Amelia et al. (2024)	40 students at SMK Negeri 3 Malang; quantitative	Peer interaction is related to Islamic Religious Education learning motivation.
8	Said et al. (2025)	30 grade X students at MA Pesantren Pondok Madinah Makassar	Several dimensions of peer relationships have a significant influence on learning motivation.
9	Maghfirah et al. (2023)	135 students at SMK Negeri 31 Jakarta	Self-efficacy, parental attention, and peer support simultaneously explain 62.3% of the variance in learning motivation.
10	Utami & Tumanggor (2024)	Post-Merdeka Curriculum transition students; correlational	Peer social support correlates positively with academic motivation ($\rho = 0.363$).
11	Uyun (2022)	Secondary school students; regression	Peer social support and perceptions of teacher teaching methods jointly correlate with learning motivation.
12	Nurkamilah & Hashuna (2026)	101 grade X students at MAN 2 Garut; mixed-method	Peer social support has a positive effect on learning motivation with a contribution of 6.9%.
13	Munjiat et al. (2025)	200 secondary school students in Indramayu; survey	Quality peer group interaction increases intrinsic and extrinsic motivation in Islamic Religious Education learning.
14	Damayanti et al. (2021)	Junior high school students; correlational	Peer social interaction has a positive relationship with learning motivation and supports mechanisms that are also relevant in adolescence.
15	Qomaruddin et al. (2023)	64 students at SMP Negeri 1 Karangawen	Peer social interaction correlates positively with learning motivation ($r = 0.624$).
16	Rosa et al. (2023)	148 grade IX junior high school students; ex post facto	Peers have a significant positive effect on learning motivation.
17	Awodun & Kenni (2021)	210 secondary school students in Nigeria; survey	The peer group is related to Chemistry learning motivation and academic performance.
18	Warsi et al. (2025)	351 higher secondary students in Pakistan	Peer habits, discipline, personal qualities, and peer achievement are predictors of student motivation.
19	Schimmelpfennig (2025)	779 adolescents in Germany; longitudinal	Peer relationships and motivational quality are interrelated over time; peers can act as both positive and negative motivators.
20	Liu et al. (2022)	4,274 students from 53 schools in China; SEM	Positive relationships with peers relate to academic interest and self-concept, which

No.	Study	Object and Method	Main Findings
21	Li et al. (2020)	596 grade 9 Zhuang ethnic students in China	subsequently relate to academic outcomes and well-being. Motivation mediates the relationship between peer relationships and scientific literacy; self-efficacy moderates part of the pathway.
22	Jamhour (2026)	400 secondary school students in Palestine; quasi-experiment	Peer-based cooperative learning increases learning motivation compared to traditional learning.

1. Characteristics and Trends of Research on the Peer Environment and Learning Motivation

The synthesis of 22 studies shows that the literature uses several constructs to describe the peer environment. The most common terms are peer social support, peer interaction, peer association, peer relationships, and peer group influence. Although the terms differ, these constructs share a core meaning, which is the quality of students' social experiences with other individuals who are in a relatively equivalent age position or educational status.

Most Indonesian studies use correlational or survey quantitative designs. Isrofi and Affandi (2025), Putri and Setiawan (2025), Gerungan and Tondatuon (2022), Kawonal et al. (2025), and Utami and Tumanggor (2024) utilize statistical relationships between indicators of peer support or association and motivation. This methodological pattern makes evidence regarding the direction of the relationship quite consistent, but the ability of the research to ascertain causal relationships remains limited.

Research examining influence through regression provides varying contribution estimates. Elingrawati et al. (2023) found that the peer environment contributes around 36.43% to the variance in mathematics learning motivation, whereas Nurkamilah and Hashuna (2026) found a direct contribution of 6.9%. Such a substantial difference indicates that the magnitude of the relationship cannot be generalized without considering the school, sample size, instruments, and other constructs within the model.

The literature also demonstrates that the peer environment is not the sole source of motivation. Maghfirah et al. (2023) incorporated self-efficacy and parental attention alongside peer social support. Uyun (2022) included perceptions of teachers' teaching methods. Liu et al. (2022) distinguished between student relationships with teachers and peers. These results support the understanding that motivation arises from the intersection of student characteristics and a social system encompassing peers, teachers, and family.

From the aspect of subject areas, peer relationships were found in Mathematics, Economics, Islamic Religious Education, Chemistry, Science, and Physical Education. Elingrawati et al. (2023) studied Mathematics, Febianti et al. (2026) studied Economics, Amelia et al. (2024) and Munjiat et al. (2025) studied Islamic Religious Education, while Awodun and Kenni (2021) studied Chemistry. Jamhour (2026) used the scope of Physical Education. The consistency of the relationship direction across different fields reinforces the proposition that the social function of peers is not limited to specific subjects.

International studies use more diverse methodological designs. Schimmelpfennig (2025) used a longitudinal design to observe changes in peer relationships and motivation over time. Liu et al. (2022) used structural equation modeling to test mechanisms through academic interest and self-concept. Li et al. (2020) used a moderated mediation model. Jamhour (2026) used a quasi-experiment. This diversity of designs provides stronger support for mechanistic explanations than simple correlational studies.

Existing research results show a consistent tendency to find a positive relationship between peer environment quality and learning motivation, yet the magnitude of the relationship varies. Indonesian literature is dominated by correlational studies, whereas international research has begun utilizing longitudinal, structural, and experimental designs. Peer constructs are also not yet uniform; thus, the term "peer environment" in this SLR is best understood as an overarching umbrella encompassing social support, relationship quality, interaction, group norms, and peer influence.

2. Mechanisms of the Peer Environment in Enhancing Learning Motivation

The peer environment can influence learning motivation through various forms of support that occur simultaneously in students' academic lives. Emotional support is one of the most frequently appearing forms in research. Friends can provide attention, acceptance, empathy, reinforcement, and a sense of security when students face academic pressure. Isrofi and Affandi (2025), Putri and Setiawan (2025), Gerungan and Tondatuon (2022), and Nurkamilah and Hashuna (2026) show that peer social support is related to better levels of learning motivation. When students feel accepted and do not face learning difficulties alone, the psychological burden that arises during the learning process can be reduced so that students' attention and energy can be more easily directed toward academic tasks.

The function of peers is also visible through informational and instrumental support. In daily interactions, students can explain material to each other, share notes, remind each other of assignments, discuss practice questions, and offer strategies to understand difficult material. This form of assistance often takes place using language and experiences closer to students' lives. This closeness makes academic communication among peers possess a different character from formal communication between teachers and students. Through this process, peers can act as learning partners who help students maintain engagement in learning.

Friendship relationships also shape learning behavior through modeling and group norm formation processes. Warsi et al. (2025) demonstrate that the personal qualities, habits, discipline, and achievements of friends can influence students' academic motivation. These findings show that behaviors repeated within a group can become a reference for its members. When a peer group values attendance, perseverance, discussion, task completion, and academic achievement, group members gain social encouragement to adapt to these habits. A different direction can emerge if the group instead normalizes indifference toward schoolwork or views academic effort as valueless.

A sense of belonging to the group constitutes another part linking peer relations with learning motivation. The Self-Determination Theory perspective places relatedness as one of the basic psychological needs supporting the development of motivation. Secure friendship relationships allow students to feel accepted as part of both the classroom and the school environment. Such feelings can increase comfort in attending, participating, questioning, and engaging in academic activities. Schimmelpfennig (2025) shows that the perception of friends as positive motivators relates to motivational regulation quality during adolescence. These findings indicate that the function of friendship is not limited to direct assistance, but also relates to students' social experiences as members of a learning community.

The peer environment is also related to the formation of self-concept and academic efficacy. Liu et al. (2022) found that positively perceived social relationships relate to

students' academic interest and self-concept. Li et al. (2020) showed that positive peer relationships relate to increased motivation, while self-efficacy influences the strength of part of that relationship pathway. Feedback, support, and social comparison that take place among friends can help students assess their own capabilities. When interactions are supportive, such assessments can reinforce the belief that students are able to cope with academic demands.

Collaborative activities clarify how peer functions can be directed to become part of learning strategies. Munjiat et al. (2025) demonstrated that quality peer group interaction supports intrinsic and extrinsic motivation in Islamic Religious Education learning. Jamhour (2026) provided evidence through an experimental design that peer-based cooperative learning can enhance motivation compared to conventional learning. These findings indicate that the influence of the peer environment does not have to be left to develop spontaneously. Teachers can organize interactions among students through group discussions, collaborative work, peer tutoring, or peer-assisted learning so that social interactions provide clearer academic benefits.

Interaction with friends can also serve as a medium for internalizing academic values and goals. In groups that value achievement, learning effort can acquire a stronger social meaning. Students do not learn merely due to individual demands, but also because they are within an environment that rewards perseverance and academic development. Munjiat et al. (2025) showed that peer interaction in Islamic Religious Education learning can strengthen motivation through social support, collaborative activities, and the reinforcement of values developing within the group. Awodun and Kenni (2021) also showed that peer groups relate to motivation toward Chemistry learning and academic performance. These findings demonstrate that group norms can strengthen students' orientation toward learning goals.

Although the general pattern of research shows positive benefits, peer relationships do not always lead to increased motivation. Schimmelpfennig (2025) showed that friends can be perceived as either positive or negative motivators. The peer environment can encourage perseverance, but it can also generate pressure to follow behaviors that do not support academic activities. This difference confirms that the number of friends or the intensity of interaction cannot be used as the primary measure. Relationship quality, the direction of group norms, and the academic orientation developing within friendships are more decisive aspects.

Overall, the peer environment operates through an interconnected network of mechanisms. Emotional support creates a sense of security, academic assistance facilitates task completion, a sense of belonging strengthens engagement, while behavioral modeling and group norms shape students' orientation toward learning. Self-concept, self-efficacy, and collaborative experiences then reinforce these processes at both the individual and group levels. Peers can therefore function as a source of support, learning partners, social models, and reference groups that help shape the quality of students' learning motivation.

3. Factors Differentiating Findings and Their Implications for High School Learning

The variation in findings across studies indicates that the relationship between the peer environment and learning motivation is not uniform. One of the primary explanations lies in the quality of the relationships experienced by students. Research on

social support generally assesses the extent to which students feel accepted, assisted, valued, and receive information from friends. Research regarding peer influence adds dimensions of group norms and behavior. These conditions indicate that two students with a similar number of friends do not necessarily obtain the same social benefits. Supportive relationships can strengthen motivation, whereas relationships full of pressure, unhealthy competition, or exclusion can produce different academic experiences.

Students' individual characteristics also influence the strength of this relationship. Li et al. (2020) demonstrated that self-efficacy can moderate part of the relationship between friendships, motivation, and scientific literacy. Maghfirah et al. (2023) also positioned self-efficacy as one of the predictors of motivation alongside parental attention and peer support. This finding indicates that the benefits of social support are not received identically by all students. Students with stronger academic beliefs may find it easier to use friends' assistance to maintain learning effort, whereas students with lower efficacy may require additional scaffolding.

The peer environment also interacts with support from teachers and families. Uyun (2022) showed that peer social support relates to motivation alongside students' perceptions of teachers' teaching methods. Maghfirah et al. (2023) included parental attention in the same model, while Liu et al. (2022) showed that teachers and peers are social agents performing different functions in students' academic development. This pattern indicates that peers are more accurately understood as one component of the learning support system. Positive friendship relationships operate more optimally when reinforced by supporting family and instructional environments.

Differences in subject characteristics can also influence the form of peer contributions. In Mathematics and Science, interactions among peers are frequently manifested through concept explanations, discussion of solution steps, and problem-solving. In Islamic Religious Education, interactions may encompass the exchange of understanding, value reinforcement, and the formation of learning communities possessing a shared orientation. In Physical Education, friends become a direct part of cooperative activities. These differences demonstrate that friendship mechanisms do not stand apart from learning activity structures. Task and subject characteristics can determine the most relevant forms of support.

Research designs also explain why the reported strength of relationships differs. Most national studies use correlational designs, so findings indicate associations but are insufficient to ascertain cause and effect. Students with high motivation may find it easier to form academically oriented peer groups, while the peer environment can also shape student motivation. Schimmelpfennig's (2025) longitudinal study supports the possibility of such a reciprocal relationship. Friends can influence motivational regulation, yet an individual's motivational characteristics can also shape the relational experiences they acquire.

Cultural conditions and school climate also shape the variation of these relationships. Research conducted in Indonesia, China, Germany, Nigeria, Pakistan, and Palestine shows positive trends, but the forms of peer support are not always identical. Competition norms, collaboration culture, teacher-student closeness, classroom organization patterns, and prevailing social values can determine whether a specific interaction is perceived as support. Such cultural differences explain why findings pointing in the same direction do not necessarily yield comparable relationship strengths.

These findings carry practical consequences for the management of high school learning. Schools can utilize peer-assisted learning, peer tutoring, and structured study groups to direct peer interactions toward productive academic activities. The groups formed need to possess objectives, role divisions, accountability, and relatively balanced participation opportunities. Jamhour (2026) demonstrated that peer-based cooperative learning can enhance motivation when activities are designed systematically. This indicates that the power of peers can be developed through deliberate instructional structures.

Teachers' attention to group norms is also required. Socially cohesive groups do not always possess positive academic orientations. Teachers can build a classroom culture that values questioning, peer assistance, acknowledgment of difficulties, and shared achievement. When such behaviors become norms, students receive signals that academic engagement garners social acceptance. Reinforcement of group effort can also encourage the emergence of shared responsibility without eliminating individual accountability.

Guidance and counseling services hold an important role, particularly for students experiencing social isolation or belonging to groups less supportive of learning. Students who do not feel accepted may lose one of the potential sources of support that strengthens motivation. Peer mentoring programs, learning buddies, group orientations, and transition period assistance can help build more productive social connections. Such interventions should pay attention to group dynamics to avoid reinforcing exclusivity or inequalities in social positions among students.

The variation in research results does not stem from a single factor. Relationship quality, student characteristics, self-efficacy, teacher and family support, subject matter, school culture, and research design interact to determine the strength of the relationship between the peer environment and learning motivation. The most crucial implication is that it is insufficient for schools merely to provide space for students to interact. The peer environment needs to be managed so that it develops into a social network supporting learning, building a sense of security, strengthening academic habits, and providing opportunities for healthy collaboration.

CONCLUSION AND SUGGESTIONS

The Systematic Literature Review of 22 studies shows that the peer environment has a consistent relationship with student learning motivation at the high school level and relevant secondary education. Research characteristics are dominated by correlational quantitative approaches, whereas international research provides additional longitudinal, structural, and experimental evidence. The peer environment supports motivation through emotional support, informational and academic assistance, a sense of belonging, behavioral modeling, group norms, self-concept formation, self-efficacy, and collaborative learning. These relationships do not possess uniform strength across every study because they are influenced by student characteristics, relationship quality, teachers, families, subjects, school conditions, culture, and research methods. Peers are therefore not a sole determining factor of motivation, but rather one of the social components that can strengthen or weaken students' learning orientation.

Theoretically, the synthesis results indicate that the influence of peers on motivation is more appropriately understood as a multidimensional social process rather than a simple relationship between two variables. Friends can serve as a source of relatedness, academic support, social modeling, and norm formation. Academically, future research

needs to distinguish the dimensions of emotional support, informational support, instrumental support, academic norms, and friendship quality so that the effects of each mechanism can be compared. Practically, schools can optimize the peer environment through study groups, peer mentoring, peer tutoring, cooperative learning, and group reflection activities. Program implementation must ensure that student engagement is inclusive so that peer strengthening does not instead produce exclusive groups or the exclusion of certain students.

Future research should utilize longitudinal and experimental designs so that the direction of the relationship between the peer environment and motivation can be determined more robustly. The use of multi-school samples is also necessary to distinguish individual character influences from school climates. Research instruments need to separate friendship quality, emotional support, academic assistance, group norms, and peer pressure. Variables such as self-efficacy, school belonging, teacher-student relationships, family support, and learning goal orientation can be tested as mediators or moderators. Research in Indonesian high schools also needs to compare the peer environment across different subjects and examine how digital groups via social media interact with face-to-face friendship relationships to shape students' learning motivation.

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