

BASIC PSYCHOLOGICAL NEEDS ARE EFFECTIVE AS MEDIATORS IN IMPROVING THE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND STUDENT ENGAGEMENT AMONG ELEMENTARY SCHOOL STUDENTS

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Submitted: 2024-08-06

Published: 2024-11-07

DOI: 10.24036/rapun.v15i2.130252

Accepted: 2024-08-06

Abstract: Basic Psychological Needs are Effective as Mediators in Improving the Relationship between School Climate and Student Engagement among Elementary School Students. This study aims to examine the contribution of school climate to student engagement with basic psychological needs as a mediating variable among elementary school students in the Agam Regency. This research used a quantitative method. Student engagement was measured using the School Engagement Measure (SEM)-MacArthur with a reliability score of 0.869, the Comprehensive School Climate Inventory with a reliability score of 0.860, and the Basic Psychological Needs in the Classroom Scale (BPN-CS) with a reliability score of 0.832. The sampling technique used in this study was cluster random sampling, involving 138 elementary school students in Agam Regency. Structural Equation Modeling (SEM) was used as an analytical technique. The study results showed a significance value (p) of $0.001 < 0.05$, indicating that the school climate contributes to student engagement with basic psychological needs as a mediating variable among elementary school students in Agam Regency. School climate and basic psychological needs jointly contributed 49.7% to student engagement. Additionally, school climate and basic psychological needs also showed partial contributions to student engagement.

Keywords: Student engagement, school climate, basic psychological needs

Abstrak: Basic Psychological Needs sebagai Mediator dalam Meningkatkan Hubungan antara Iklim Sekolah dan Student Engagement pada Siswa Sekolah Dasar. Penelitian ini bertujuan untuk melihat bagaimana kontribusi iklim sekolah terhadap student engagement dengan *basic psychological need* sebagai variabel mediasi pada siswa Sekolah Dasar di kabupaten Agam. Penelitian ini menggunakan metode kuantitatif. Student engagement diukur menggunakan *School Engagement Measure (SEM)-*

MacArthur dengan reliabilitas 0,869, *Comprehensive School Climate Inventory* dengan reliabilitas 0.860, dan *basic psychological needs in the Classroom Scale* (BPN-CS) dengan reliabilitas sebesar 0,832. Teknik pengambilan sampel pada penelitian ini menggunakan *cluster random sampling* dengan jumlah 138 siswa Sekolah Dasar di kabupaten Agam. *Structural Equation Modeling* (SEM) merupakan teknik analisis yang digunakan pada penelitian ini. Hasil penelitian ini menunjukkan nilai signifikansi (p) sebesar $0,001 < 0,05$, hasil ini menunjukkan bahwa iklim sekolah berkontribusi terhadap *student engagement* dengan *basic psychological need* sebagai variabel mediasi pada siswa Sekolah Dasar di kabupaten Agam. Iklim sekolah dan *basic psychological need* secara simultan memberikan kontribusi sebesar 49,7% terhadap *student engagement*. Iklim sekolah dan *basic psychological need* secara parsial juga menunjukkan kontribusi terhadap *student engagement*.

Keywords: Pregnancy, working women, productive

INTRODUCTION

The policy on implementing the *Merdeka Belajar* curriculum, as outlined in the Ministry of Education, Culture, Research, and Technology Decree No. 56 of 2022 regarding Guidelines for Curriculum Implementation in the Context of Learning Recovery, is one of the government's efforts to develop education in Indonesia. Student engagement plays a crucial role in the successful implementation of the *Merdeka Belajar* curriculum. Encouraging student engagement in the learning process is one of the objectives of implementing the *Merdeka Belajar* curriculum (Lembong et al., 2023). Student engagement is defined as the multidimensional involvement of students in the learning process, encompassing

behavioral, emotional, and cognitive dimensions, as evidenced by their participation in both academic and non-academic activities within the school and classroom settings (Fredricks et al., 2004). Low student engagement is one of the primary factors contributing to high dropout rates. Finn, as cited in (Mastrorilli, 2016) stated that dropping out occurs when an individual experiences prolonged disengagement. Data from the Ministry of Education and Culture's Data and Information Center (Pusdatin Kemdikbud, 2023) revealed that in 2023, there were 76,834 dropouts in Indonesia, with the highest number at the elementary school level, totaling 40,623 students. Agam

Regency is among the regions with the highest number of dropouts in West Sumatra, with 4,619 children affected (Pusdatin Kemendikbud, 2024). Based on this data, a survey was conducted to investigate issues in the learning process, targeting teachers teaching in Agam Regency. The survey revealed that in Agam Regency, there are problems indicating low levels of behavioral, emotional, and cognitive engagement among students while at school.

Low student engagement affects academic achievement, leading to poor performance and a monotonous learning process. According to Bond et al. (2020), student engagement is associated with achievement levels, perseverance, retention, and can even serve as a predictor of school dropout. Ali & Hassan (2018) further state that low student engagement contributes to issues such as delayed submission of assignments, increased levels of boredom, and students skipping classes.

Interactive learning is an approach utilized in the implementation of the *Merdeka Belajar* curriculum. Student engagement is a key factor in achieving interactive learning in the classroom.

Self-determination theory suggests that intrinsic motivation, which serves as the foundation for student engagement, is

affected by the fulfillment of basic psychological needs and the surrounding environment (context) (Ryan & Deci, 2000). Self-determination theory explains that environmental factors affect the fulfillment of basic psychological needs. An environment that supports the fulfillment of these needs has a greater impact than one that hinders it. In this study, school climate is selected as the environmental factor affecting the dynamics of Self-determination theory. Frederick, as cited in (Pradhata & Muhid, 2021) stated that internal and external factors affect student engagement. Internally, it is affected by the fulfillment of basic psychological needs, while externally, it is affected by the school climate.

According to The National School Climate Council, as cited in (Mardianto et al., 2020) school climate refers to the standards, principles, and expectations that support students' social, emotional, and physical well-being. Students in a positive school environment are more likely to be engaged. When students feel comfortable in an environment, they are more likely to develop psychologically, fostering a sense of safety toward the school and all its elements (Mardianto et al., 2020). Purwita & Tairas as cited in (Fikrie & Ariani, 2019), stated that when students perceive their school as having

a positive and conducive climate, they tend to be more engaged with their school. The elements of school climate include relationships among school members, teacher support, aspects of personal development, clear school rules, the application of innovations, and the completeness and comfort of the physical environment.

The fulfillment of basic psychological needs impacts students' intrinsic motivation to actively engage in school activities. Ryan & Deci (2017) define basic psychological needs as innate, universal nutrients at a fundamental psychological level that are essential for growth, integrity, and personal well-being. These needs, present in individuals of all ages, genders, and cultures, consist of autonomy, competence, and relatedness, and significantly affect intrinsic motivation.

The fulfillment of basic psychological needs in elementary schools is crucial. According to Tian et al. (2014), the fulfillment of basic psychological needs also affects students' antisocial behavior. Antisocial behavior is affected by the need for relatedness; poor relationships with peers and teachers can lead to more severe antisocial behavior in elementary schools.

A study conducted by Ardalisa (2014) using a self-report questionnaire completed by 391 seventh- and eighth-grade junior high school (SMP) students from three state junior high schools in Depok showed a relationship between student's perceptions of school climate and student engagement, partially mediated by the fulfillment of basic psychological needs. The findings indicate that the fulfillment of students' basic psychological needs in the classroom plays a role in explaining the relationship between students' perceptions of school climate and student engagement.

A study conducted by Kurdi & Archambault (2020) involving 170 elementary school students in Canada, aged 7–10, revealed that elementary students' perceptions of basic psychological needs are associated with all types of engagement. The results showed that the relationship between student engagement and their self-perception of autonomy and competence in mathematics varied depending on their immigration status and anxiety levels. Most findings indicated that immigrant students with high anxiety levels reported higher engagement compared to other students when they felt autonomous. Meanwhile, a study conducted by Laudya & Savitri (2020) found that school climate contributes to student engagement. Based on

the analysis, school climate has a significant effect on student engagement, with an R-square of 0.390, a β value of 0.625, and a p-value of 0.000. Thus, it can be concluded that a positive school climate improves student engagement.

Research on the contribution of basic psychological needs, school climate, and student engagement at the elementary school level in Indonesia is still limited. Most existing studies originate from Western contexts. Therefore, this study will be conducted in Indonesia, so the findings can serve as a comparison between studies conducted in Indonesia and those in other countries. This will provide new perspectives on cultural variations in the relationship between basic psychological needs and school climate with student engagement, while also addressing gaps in the global literature. The study will be conducted within a different cultural context to examine the effect of school climate in an Indonesian setting, characterized by values of *gotong royong* (mutual cooperation), familial bonds, and respect for authority, on the fulfillment of basic psychological needs. Additionally, it will explore the contribution of school climate to student engagement, with basic psychological needs as a mediating variable

among elementary school students in the Agam Regency.

RESEARCH METHODS

This study used a quantitative research design. According to Azwar (2017) the quantitative approach focuses on the analysis of numerical data, with data processing conducted using statistical analysis methods. The population for this study consisted of elementary school students in Agam Regency. The subjects of the study were 138 fourth- and fifth-grade elementary school students from Cluster 1 in Palupuh District, one of the districts in Agam Regency. The sampling method used was cluster random sampling. Cluster random sampling involved selecting small groups randomly, rather than selecting individuals directly (Sugiyono, 2013)

The instrument used in this study employed a Likert scale. The instruments for school climate and basic psychological needs utilized a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), while student engagement was measured using a 4-point Likert scale ranging from 1 (never) to 4 (always). Student engagement was assessed using the School Engagement Measure (SEM)-MacArthur, developed by Fredricks and modified by Khairinnisa (2018), with a reliability score of 0.896 and

consisting of 13 items. The school climate scale used was the Comprehensive School Climate Inventory by NSCC, adapted by Nadhifa (2018) with a reliability score of 0.860 and consisting of 14 items. The basic psychological needs scale used was the Basic Psychological Needs in the Classroom Scale (BPN-CS), developed by Conesa & Duñabeitia (2021), with a reliability score of 0.832 and comprising 14 items. Data analysis in this study was conducted using Structural Equation Modeling (SEM).

RESULTS AND DISCUSSION

RESULTS

The study was conducted with 138 fourth- and fifth-grade elementary school students in Agam Regency. The respondents were aged between 9 and 12 years. Based on gender, 55.8% of the respondents were male, while 44.2% were female. The research was carried out from July 15 to July 19, 2024, using direct questionnaire distribution to the students. Based on the research conducted, the following data were obtained:

Table 1. T-Test Results

Model	Unstandardized		Standardized	
	Coefficients		Coefficients	
	B	Std. Error	t	Sig
Constant	1.713	2.773	0.618	0.538
School Climate	0.501	0.111	4.529	0.000
<i>Basic Psychological Needs</i>	0.313	0.115	2.718	0.007

Based on Table 1, the study shows that, partially, school climate has a significance value of $0.000 < 0.05$ and a t-value of $4.529 > 1.978$. These results indicate that school climate has a significant effect on student engagement, thus supporting Ha1 in this study. Basic psychological needs have a significance value of $0.007 < 0.05$ and

a t-value of $2.178 > 1.978$, indicating that basic psychological needs also significantly contribute to student engagement, thereby supporting Ha2 in this study. Based on the partial determination coefficient, school climate contributes 46.9%, while basic psychological needs contribute 42% to student engagement.

Table 2. Simultaneous Test

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4388.921	2	2194.461	66.604	.000 ^b
	Residual	4447.948	135	32.948		
	Total	8836.870	137			

Based on Table 2, the significance value is < 0.05 , specifically $0.000 < 0.05$, indicating that school climate and basic psychological needs collectively (simultaneously) contribute to student engagement.

Furthermore, the R Square value in this study is 0.497, which shows that school climate and basic psychological needs collectively contribute 49% to student engagement.

Table 3. Direct Effect of Variables

	Estimate	z-value	P
School Climate → Student Engagement	0.062	4.579	$< .001$

Table 4. Mediation Effect of Variables

	Estimate	z-value	P
School Climate → Basic Psychological Needs → Student Engagement	0.062	4.579	$< .001$

Based on Table 3, the p-value is < 0.01 , indicating that $p < 0.05$. It can be concluded that school climate has a significant direct effect on student engagement, with an estimated value of 0.062. Similarly, Table 4 shows a p-value of < 0.001 , which also indicates $p < 0.05$. This demonstrates that

school climate indirectly affects student engagement through the fulfillment of basic psychological needs as a mediating variable, with an estimated value of 0.062. Therefore, it can be concluded that Ha3 in this study is accepted.

Discussion

The study conducted with 138 elementary school students in Agam Regency shows that, partially, school climate has a significant positive effect on student engagement. Similarly, the results also indicate that basic psychological needs contribute positively and significantly to student engagement among elementary school students in the Agam Regency. This study further proves that basic psychological needs are effective in mediating the relationship between school climate and student engagement.

School climate and basic psychological needs collectively contribute 49.7% to student engagement, while the remaining 50.3% is affected by factors outside the variables of this study. Partially, school climate contributes 46.9% to student engagement. These findings align with the research conducted by (Laudya & Savitri, 2020) which shows that school climate significantly affects student engagement. When students feel safe at school and understand that rules and norms are applied fairly and consistently (safety), perceive and experience positive relationships with teachers and peers (relationship), understand and value that the teaching and learning environment supports their

educational growth (teaching and learning), and recognize that the available school facilities are sufficient for their use (institutional environment), it positively affects their behavior and participation in school activities, both academic and non-academic. The study conducted by Muallifah & Hannani (2023) also revealed that school climate affects student engagement by 11.6% among students of SMP Islam Sabilur Rosyad Karangbesuki Malang. This indicates that a positively established school climate can improve student engagement. The study conducted by Djordjic (2020) involving 332 high school students in Serbia also demonstrated a positive relationship between school climate and student engagement. The school climate, which includes teacher-student relationships, the establishment of fair rules, and respect for diversity, influences behavioral, cognitive, and emotional aspects of the school environment. These factors also have an impact on various areas of students' lives. Mardianto et al. (2023) also revealed that a positively established school climate supports student engagement by fostering positive relationships among students and reducing aggressive behavior in student interactions.

The fulfillment of basic psychological needs significantly contributes to student engagement among elementary school students in the Agam Regency, with a contribution of 42%. This aligns with the findings of Williams et al. (2018), who conducted a study with 113 elementary school students in the USA, aged 11–13 years. Their research demonstrated that fulfilling basic psychological needs positively affects student engagement. Similar findings were also reported by Yu et al. (2018), who conducted a study on first- and second-year medical students in China. Their research showed that basic psychological needs contributed 13% to student engagement, indicating that student engagement can be affected by psychological traits, particularly the fulfillment of basic psychological needs. The fulfillment of students' need for competence, need for relatedness and need for autonomy contributes to an increased enthusiasm, proactivity, intrinsic motivation, and the development of a positive mental state, all of which improve student engagement to a higher level. Student engagement among students in the Agam Regency is predominantly categorized as low. According to Fredricks et al. (2004), low student engagement is

also referred to as student disengagement, characterized by a lack of emotional involvement (emotional disengagement), such as a decline in students' interest in learning, a lack of participation in the learning process (behavioral disengagement), and a lack of cognitive involvement in learning (cognitive disengagement), which is evident from the students' diminished interest in engaging with the learning materials.

Elementary school students in Agam Regency mostly perceive the school climate as moderate. While students generally feel they are in a relatively positive school climate, several factors make them feel uncomfortable. Based on categorical analysis of specific aspects, teaching and learning are rated as high, while interpersonal relationships and the institutional environment are rated as moderate, and safety is rated as low. The low perception of the safety aspect indicates that elementary school students in Agam Regency feel that the rules and norms in schools do not provide a sense of safety—physically, emotionally, or intellectually. This is due to the absence of clear rules on bullying and the presence of intimidation in the form of teasing, taunting, and social exclusion experienced

by students at school. According to research conducted by Najam & Kashif (2018), it reveals that bullying by teachers and peers significantly impacts students' behavioral engagement. As a result of the bullying experienced, students are unable to fully concentrate on their tasks, do not participate in class activities, and this ultimately affects their overall student engagement.

The fulfillment of basic psychological needs among students in Agam Regency falls into the moderate category. This indicates that most students feel their basic psychological needs are adequately met, although some aspects remain unfulfilled. This aligns with the categorization based on specific aspects, which shows that the need for autonomy is at a very high level, and the need for competence is categorized as high. However, the need for relatedness and need for novelty are categorized as low.

The high level of need for autonomy among elementary school students in Agam Regency contrasts with the view of Chirkov, as cited in Maulana et al. (2016), which suggests that the need for autonomy in Eastern cultural contexts is lower compared to Western cultures. This is due to the strong emphasis on values such as obedience to authority, strict discipline, and

a hierarchical, authoritarian style between the young and the old. However, Y. Wang et al. (2019) argue that within Self-Determination Theory (SDT), autonomy is not about independence or individualism but rather the sense of being supported in personal behavior and willingness. Therefore, students in Agam Regency, who live in a collectivist culture, demonstrate a fulfilled need for autonomy. This happens because they feel supported in their behavior and personal will. Based on the categorization test explained above, it can be concluded that although the school climate and the fulfillment of basic psychological needs are relatively good, with some aspects categorized at a high level, they are not sufficient to elevate the variable of student engagement to a high level. This may be due to the low levels of certain aspects within the variables. In this study, the issue of student engagement is attributed to the low levels of certain aspects in the independent variables, such as the safety aspect in the school climate variable, and the need for relatedness and need for novelty in the basic psychological needs variable. The safety aspect, which includes a secure environment free from bullying and the presence of clear anti-bullying rules in schools, significantly

affects student engagement. According to Sakban (2023) in the school context, verbal bullying is the most dominant form of bullying perpetrated by students. This aligns with the findings of this study, which show that many elementary school students in Agam Regency feel unsafe due to verbal teasing. Bullying experienced by students at school impacts their student engagement; it hinders their ability to fully concentrate on tasks, reduces classroom participation, and ultimately affects their overall engagement.

Based on the mediation analysis, it can be observed that there is an effect of school climate on student engagement mediated by the fulfillment of basic psychological needs. This indicates that a positive school climate affects student engagement through the fulfillment of basic psychological needs as a mediating variable among elementary school students in the Agam Regency. This finding aligns with the study by Ardalisa (2014), which stated that there is a relationship between student's perceptions of school climate and student engagement, partially mediated by the fulfillment of basic psychological needs. The findings indicate that the fulfillment of students' basic psychological needs at school plays a role in explaining the relationship between

students' perceptions of school climate and student engagement. This study also aligns with Self-Determination Theory, which reveals that intrinsic motivation, the foundation of student engagement, is affected by basic psychological needs and context. This theory also reveals that the environment (context) affects the fulfillment of basic psychological needs (Ryan & Deci, 2000). In this study, the school climate serves as the context that impacts basic psychological needs.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the research conducted, it can be concluded that school climate and basic psychological needs contribute to student engagement among elementary school students in Agam Regency. Hypothesis testing shows that school climate and basic psychological needs have a significant positive effect on student engagement. This indicates that the more positive the school climate and the better the fulfillment of basic psychological needs, the higher the level of student engagement. School climate and basic psychological needs collectively contribute 49.7% to student engagement among elementary school students in the Agam Regency. Additionally, school climate also

contributes to student engagement through the fulfillment of basic psychological needs as a mediating variable.

Suggestion

For future researchers, it is recommended to use measurement tools with items that are easier to understand and to apply

different methods, such as experimental designs, to improve student engagement. Future studies are also encouraged to use proportional random sampling techniques to obtain more representative results for each group within the population.

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