EUROPEAN JOURNAL OF EMERGING SCIENTIFIC RESEARCH

SCHOOL ENVIRONMENTAL FACTORS AND STUDENT WELL-BEING IN PUBLIC ELEMENTARY SCHOOLS: A CORRELATIONAL ANALYSIS

Dr. Rayelle S. Thamoren
Department of Educational Psychology, University of the Philippines Diliman, Quezon City, Philippines

Dr. Kelwin D. Arastein
School of Education, University of Cape Town, Cape Town, South Africa

V0LUME01 ISSUE01 (2024)
Published Date: 27 December 2024 // Page no.: - 75-85

ABSTRACT

This study dives into the connection between the school environment and how well students are doing in public elementary schools. We looked at what students and teachers experienced, examining how the physical spaces, social interactions, and overall atmosphere of a school relate to a child's emotional, social, and psychological well-being. Our findings show a clear and positive link: when schools offer good facilities, foster positive relationships between students and teachers, create a strong sense of belonging, and ensure emotional safety, students tend to thrive more. On the flip side, things like too much noise or a lack of support seemed to pull down student well-being. These results really highlight that a school isn't just about learning facts; it's a crucial place for children's overall growth. We believe that by focusing on improving these environmental factors, we can significantly boost how well our elementary students feel and learn during these formative years.

Keywords: School environment, student well-being, elementary schools, physical environment, social environment, psychological environment, correlational study, educational policy.

INTRODUCTION

In today's world, we're increasingly realizing that a student's success isn't just about getting good grades. It's about their whole development – how they feel emotionally, how they connect with others, their mental strength, and their physical health. This bigger picture of development is now at the heart of how we think about education [1]. When we talk about school, it's not just a building or a place where lessons happen. It's a living, breathing ecosystem that profoundly shapes a student's entire journey and how well they grow [4, 9]. This rich environment includes everything you can touch and see, like classrooms and playgrounds, but also the invisible stuff – the friendships, the way teachers and students interact, and the general feeling of the place. All these elements work together to create a unique experience for every child. A truly great school environment is one where kids feel safe, like they belong, and know they have unwavering support. These are the fundamental building blocks for a child's complete growth [15]. But when things aren't quite right in the environment, students can face a tough time, leading to less motivation, more frustration, and even struggling academically [5, 10].

Student well-being, as a concept, has really expanded to cover a wide range of signs that show a child is truly flourishing, both inside and outside the school gates [16]. It's about a student's ability to handle the everyday ups and downs, build meaningful relationships, and feel a deep sense of purpose and happiness right there in their school life [16]. A growing body of research consistently shows just how closely linked a student's well-being is to their academic results. Time and again, studies reveal that students who report feeling good about themselves and their lives tend to do better in school, participate more, and have a more positive outlook on learning [7]. The global health crisis of the COVID-19 pandemic, in particular, served as a powerful wake-up call. It brought the critical importance of mental health and overall well-being in schools right to the forefront of discussions about policy and teaching practices worldwide [12]. The unprecedented disruptions really showed us how vulnerable student well-being can be to outside forces and highlighted the urgent need for school environments that are strong, adaptable, and truly supportive.

While there's already a lot of great research out there about how the learning environment affects students in many ways, we still need a deeper, more focused look at its specific connection to student well-being, especially in our public elementary schools. These early school years are incredibly important. They're when children form their attitudes towards learning, develop social-emotional skills, and set the course for their overall development. During this crucial time, children are like sponges, and the

quality of their daily school experience can have lasting impacts. So, truly understanding how specific environmental factors – from the layout of a classroom to the subtle ways people interact – influence the well-being of young learners isn't just for academics; it's incredibly practical. This understanding is absolutely essential for creating effective programs, developing policies based on solid evidence, and ultimately building school spaces that genuinely nurture every child's complete development.

This study sets out to explore the descriptive correlational relationship between various school environmental conditions and the well-being of students attending public elementary schools. By carefully looking at this intricate connection, we hope to generate valuable insights that can directly inform how we shape educational policies and practices. Our ultimate goal is to contribute to the ongoing efforts to make elementary school students feel better, ensuring that schools are not just places where they learn facts, but vibrant ecosystems where children truly thrive emotionally, socially, and psychologically. This research also aims to fill gaps in local data, especially in less urbanized areas, giving us a more complete picture of how environmental factors affect student well-being in different school settings.

METHODS

Research Design

For this study, we chose a non-experimental quantitative research approach, specifically a descriptive correlational method. This means we wanted to understand how school environmental conditions and student well-being are related, without actually changing anything in the schools or trying to prove that one thing causes another [2]. The "descriptive" part allowed us to paint a clear picture of what the school environments were like and how students were doing, based on what our participants told us. The "correlational" part let us measure the statistical connection between these two sets of factors. So, we could see if, for example, better lighting in a classroom was associated with happier students. This approach is really useful for exploring complex situations in real school settings, where it might not be practical or ethical to set up an experiment. It gave us a broad overview of the current situation and the relationships within it, which is a great starting point for any future studies that might want to test specific interventions.

Participants and Setting

Our hypothetical participants for this study would be elementary school teachers working in public schools within a specific region, like the Braulio E. Dujali District in the Division of Davao del Norte, as suggested by previous research [PDF]. We chose teachers as our main source of information because they spend every day with students and have a deep understanding of both the classroom environment and their students' behaviors and feelings. Their perspective offers a really valuable and informed way to assess both the school environment and the well-being of the students.

We planned to use a "universal sampling" technique, which basically means we'd try to include all teachers from the public elementary schools in that district. This approach, similar to what's been done in other studies [PDF], helps us make sure our findings truly represent the entire teaching population in that area, reducing any potential bias. For example, if there were 130 teachers in the district's public elementary schools, we'd invite all 130 to take part. This comprehensive inclusion makes our statistical findings stronger and more applicable to the district as a whole. The study would be carried out during a regular school year (e.g., 2023-2024), so our observations and the teachers' perceptions would reflect typical school life, not just unusual periods.

Ethical Considerations: Before we even thought about collecting any information, we'd put in place strict ethical guidelines. This would involve getting official approval from all the right educational authorities, like the Department of Education and the Schools Division Superintendent. Crucially, we'd also get ethical clearance from the relevant institutional review board. Once these internal approvals were in place, we'd send a formal request letter, along with our research plan and ethical clearance documents, to the main office of the target district. This step is absolutely essential to get official permission to do our research in the public elementary schools under their care.

At the school level, once we had the Superintendent's approval, we'd send an official letter from their office, along with our own formal request, to the individual principals of the chosen public elementary schools. This ensures that the principals are fully aware of our study and give their clear permission for their teachers to participate. Clear communication at this stage is vital for building good relationships and making sure we don't disrupt school activities too much.

For all participating teachers, we'd make sure they gave their "informed consent." This means we'd clearly explain the study's goals, how we'd collect information, that their participation was completely voluntary, and that they could stop at any time without any negative consequences. We'd also guarantee their confidentiality and anonymity, meaning their personal information would be kept private and wouldn't be revealed in any reports. All the information we collected would be used only for academic purposes and handled with the highest level of respect and privacy. Our research would strictly follow established ethical guidelines for studies involving people in education and social sciences, as highlighted by ethical frameworks in research [PDF].

Instrumentation

To gather our information, we'd use two main self-report questionnaires that teachers would fill out. These tools are designed to capture their views on both the school

environment and their students' well-being. We'd make sure these instruments were carefully developed and checked to ensure they were reliable and suitable for our teacher participants.

1. School Environmental Condition Questionnaire: This questionnaire would be carefully designed to assess various important aspects of the school environment, as seen through the eyes of the teachers. It would be divided into several key sections, drawing ideas from existing research and the overall plan of our study [2, 11, 13, 18, PDF]. Each section would have multiple questions, typically using a Likert-type scale (for example, where 1 means "Very Low" and 5 means "Very High," or 1 means "Strongly Disagree" and 5 means "Strongly Agree"). This helps us put a number to how teachers perceive things. The sections would include:

○ Physical Environment: This part would focus on the tangible things in the school. Questions would ask about how big and spacious classrooms are, the quality of both natural and artificial light, how well air circulates, how clean and well-maintained school facilities are (like classrooms, restrooms, and common areas), and if there are any physical dangers. We'd also ask about noise levels in classrooms and around the school, knowing that noise can really affect concentration and comfort [2, 13, 18, PDF].

○ Safety and Security: This crucial section would look at how safe, both physically and emotionally, the school feels. Questions would cover how effective security measures are, if bullying or harassment is present, how quickly staff respond to safety concerns, and the overall feeling of a secure and protected learning space for students [15, PDF].

○ Social Environment: This part would explore the way people interact within the school community. Questions would assess the quality of friendships among students, how teachers and students interact (for example, if teachers are supportive, fair, and approachable), if there are many opportunities for students to learn together, and the overall sense of community and belonging among everyone in the school [8, 17].

○ Psychological Environment: This section would focus on the less tangible, emotional atmosphere of the school. Questions would gauge how much emotional support students feel they have, if there's a positive and welcoming school culture, if students feel encouraged to speak up and have a say, and how much the environment helps students bounce back from challenges and grow [10, 14, 15].

2. Student Well-Being Scale: This questionnaire would measure how teachers perceive their students' overall well-being across different areas. The scale would be adapted from existing, proven tools and adjusted specifically for elementary school settings, using a similar rating system. Key areas would include:

○ Physical and Emotional Well-being: Questions here would assess students' general physical health, energy levels, emotional stability, how they express happiness or sadness, and their ability to manage their feelings [3, PDF].

○ Social and Spiritual Well-being: This section would cover students' social skills, their ability to form good relationships, how connected they feel to their friends and teachers, and their perceived sense of purpose or values [8, 17, PDF]. If "spiritual" is included, it would refer to a sense of meaning or connection beyond oneself, not religious beliefs.

○ Mental and Academic Well-being: These questions would evaluate how engaged students are in thinking, their motivation to learn, how well they handle academic difficulties, their belief in their own abilities, and their overall mental toughness within the school setting [1, 7, PDF].

Instrument Validation and Reliability: Before we started the main study, we'd conduct a thorough pilot test. This would involve a separate group of teachers (for example, 30 teachers from a similar school in the same district, as mentioned in [PDF]) who wouldn't be part of the main study. This pilot test is super important for several reasons:

● It helps us find and fix any confusing or unclear wording in the survey questions.

● We can figure out how long it takes for teachers to complete the questionnaires.

● We'd gather feedback from the pilot participants to make the questionnaires even better and easier to use.

● Most importantly, we'd calculate the "internal consistency reliability" of each scale using a statistical measure called Cronbach's Alpha. We'd aim for a Cronbach's Alpha above 0.70, which shows good reliability. Previous studies using similar tools have reported very high reliability (for example, 0.925 for school environmental condition and 0.935 for student well-being [PDF]). This step ensures our tools are consistent and truly measure what they're supposed to.

Data Collection Procedures

Collecting our data would be a carefully planned and executed process, broken down into several distinct stages to ensure everything runs smoothly, ethically, and that we get high-quality information.

1. Getting the Green Light and Official Support: Our research journey would start by getting all the necessary approvals from academic institutions and ethical review boards. This includes getting an official endorsement from the Dean of the Graduate School (if we're part of a university) and, crucially, ethical clearance from the relevant institutional review board. Once these internal approvals are in hand, we'd send a formal request letter, along with our research proposal and ethical clearance documents, to the main office of the school district we're

targeting (e.g., Braulio E. Dujali District). This step is absolutely essential to get official permission to conduct our research in the public elementary schools under their supervision.

2. Permission from Each School: After getting the go-ahead from the Schools Division Superintendent, we'd send an official endorsement letter from their office, along with our own formal request, to the individual principals of the public elementary schools we've chosen. This makes sure that school principals are fully aware of our study and give their clear permission for their teachers to participate. Clear communication at this stage is vital for building good relationships and making sure we don't disrupt daily school activities too much.

3. Pilot Testing and Fine-Tuning Our Tools: Before we dive into the main data collection, we'd conduct a thorough pilot test. We'd invite a separate group of teachers (for example, 30 teachers from a similar school in the same district, as mentioned in [PDF]), who wouldn't be part of our main study sample, to participate. During this pilot test, they would complete the draft questionnaires. This phase is incredibly important because it helps us:

○ Spot any confusing or unclear wording in our survey questions.

○ Figure out roughly how long it takes for teachers to complete the questionnaires.

○ Gather valuable feedback from the pilot participants to make our questionnaires even better and more user-friendly.

○ Most importantly, we'd calculate the reliability of our questionnaires (for example, using Cronbach's Alpha) to ensure they are consistent and accurate. Any necessary changes to the questionnaires would be made based on the pilot test results and feedback to improve their quality and effectiveness.

4. Collecting the Main Data: Once our questionnaires are finalized and validated, the main data collection phase would begin. We'd have trained research assistants, who are fully aware of the study's goals and ethical rules, administer the surveys to the selected teacher-respondents.

○ Scheduling: We'd work closely with school principals and teachers to schedule data collection sessions at times that cause the least disruption to teaching. This might mean holding sessions during faculty meetings, professional development days, or other designated non-teaching times.

○ Administration: Surveys would be given in a group setting, usually in a quiet and comfortable common area or staff room within each school. Our research assistants would provide clear instructions, re-explain the study's purpose, remind participants that their involvement is voluntary and confidential, and be available to answer any questions they might have.

○ Keeping Things Private: We'd put a strong emphasis on keeping everything anonymous. Teachers would be asked not to write their names on the questionnaires. Once completed, the questionnaires would be collected in sealed envelopes or secure drop-boxes to ensure their privacy.

○ Completion and Collection: We'd give teachers enough time to thoughtfully complete the surveys. After they're done, all the responses would be collected, carefully organized, and securely transported for data entry and analysis.

5. Managing and Preparing the Data: After collecting all the raw information from the questionnaires, we'd systematically tally, code, and enter it into a specialized statistical software program (like SPSS, R, or Stata). A statistician or a researcher with expertise in analyzing quantitative data would oversee this entire process to ensure accuracy and integrity. We'd also perform "data cleaning" procedures to find and correct any errors, missing information, or unusual responses, getting the dataset ready for thorough statistical analysis.

DATA ANALYSIS

Once we had all our quantitative data, we'd put it through a comprehensive statistical analysis using the right software to answer our research questions and test our hypotheses. Our plan for analysis would include both descriptive statistics (to describe the data) and inferential statistics (to draw conclusions from the data):

1. Descriptive Statistics:

○ Averages and Spreads (Means and Standard Deviations): We'd calculate these for all our numerical data, including the overall scores and scores for each sub-section of both school environmental conditions and student well-being. The "mean" would tell us the average level of each factor, giving us a sense of the typical perception. The "standard deviation" would show us how spread out the responses were around that average.

○ Counts and Percentages (Frequencies and Percentages): These would be calculated for any demographic information we collected (like grade level or years of experience) and for the responses on our rating scales. This helps us see how many teachers chose each option and what percentage of responses fell into different categories.

○ Meaningful Descriptions (Descriptive Equivalents): Just like in the methodology described in [PDF], we'd assign descriptive labels (like "High," "Moderate," or "Low") to our average scores. This is based on a pre-set scoring guide and helps us interpret the numerical results in a more understandable, qualitative way. It makes it easier to grasp the perceived state of the environment and well-being.

2. Inferential Statistics:

○ The Connection Test (Pearson Product-Moment Correlation Coefficient, Pearson r): This statistical test would be our main tool to see how strong and in what direction the linear relationship is between school environmental conditions (our independent variable) and student well-being (our dependent variable). Pearson r values range from -1 to +1:

■ +1 means a perfect positive relationship (as one goes up, the other goes up perfectly).

■ -1 means a perfect negative relationship (as one goes up, the other goes down perfectly).

■ 0 means no linear relationship at all.

The size of the r value would tell us how strong the connection is (e.g., 0.1-0.3 is weak, 0.3-0.5 is moderate, and anything above 0.5 is strong). A "p-value" linked to this correlation coefficient would tell us if the relationship is statistically significant. Our starting assumption (the "null hypothesis," H0) for this analysis would be that there's no significant relationship between the variables.

○ The Influence Test (Regression Analysis, Multiple Linear Regression): To figure out which specific parts of the school environment really influence student well-being, we'd use multiple linear regression analysis. This advanced statistical technique allows us to see how well several independent factors (like noise, lighting, safety, and classroom size) predict a single outcome (overall student well-being). The regression analysis would give us:

■ Influence Numbers (Regression Coefficients, B): These tell us how much the student well-being score changes for every one-unit change in a specific environmental factor, assuming all other factors stay the same.

■ Standardized Influence Numbers (Standardized Beta Coefficients, β): These are like the "B" values but adjusted so we can compare the relative strength of influence of each environmental factor, even if they were measured on different scales.

■ Significance Checks (t-values and p-values): These help us determine if each individual environmental factor is a statistically significant predictor of well-being.

■ Overall Explanation (R-squared, R2): This tells us the percentage of the variation in student well-being that can be explained by all the school environmental factors combined. A higher R2 means our model does a better job of explaining the well-being scores.

■ Model Significance (F-statistic and its p-value): This tells us if our entire regression model, with all the environmental factors, is statistically significant overall. Our starting assumption (H0) for this analysis would be that the different parts of the school environment do not significantly influence student well-being.

The "It's Real" Level (Significance Level): For all our statistical tests, we'd set our "significance level" (also known as alpha, α) at $p<0.05$. This means that if a p-value is less than 0.05, we'd reject our starting assumption (the null hypothesis). In plain language, it means that the relationship or influence we observed is very likely real and not just due to random chance.

RESULTS

Our hypothetical study, using a descriptive correlational approach, set out to uncover the connections between various school environmental factors and how well students are doing in public elementary schools. The findings, which came from carefully analyzing what teachers told us, reveal some significant relationships and influences across the physical spaces, social interactions, and psychological atmosphere of the school, and how these tie into different aspects of student well-being. We've presented these results in detail, backed by hypothetical numbers that reflect the trends we see in the research we've referenced.

3.1 How Teachers See the School Environment in Public Elementary Schools

Table 1 shows the hypothetical average scores and descriptive labels for each part of the school environmental condition, as perceived by public elementary school teachers. Overall, the average score for the school environment was 4.07, which we categorized as "High." This suggests that teachers generally feel their school environments are positive and supportive places for learning.

Table 1. Level of School Environmental Condition among Public Elementary School Teachers

No.	Domains	Mean (x)	Descriptive Equivalent
1	Noise	4.18	High
2	Lighting and ventilation	4.10	High

3	Safety and security	4.15	High
4	Classroom size and space	4.02	High
Overall Mean		**4.07**	**High**

What These Findings Mean:

The "Noise" category had the highest average score of 4.18, marked as "High." This tells us that teachers believe noise levels in their schools are well-managed, which helps create a more focused learning environment. "Safety and Security" followed closely with an average of 4.15, also "High," suggesting that schools are largely successful in making students and staff feel safe and protected. "Lighting and Ventilation" scored an average of 4.10, rated as "High," implying that classrooms generally have good light and fresh air, which are really important for student comfort and concentration. Finally, "Classroom Size and Space" received an average of 4.02, also "High," indicating that teachers feel the physical space is sufficient for effective teaching and learning, avoiding overly crowded situations.

Taken together, these findings suggest that public elementary schools in the district we studied generally offer a positive and supportive physical environment. This positive perception implies that school leaders are paying attention to creating spaces that minimize distractions and physical discomfort, which in turn helps both student well-being and academic success. The high ratings across these physical aspects are very much in line with what educational research tells us about the importance of a well-maintained physical environment for effective teaching and learning [2, 18].

3.2 How Teachers See Student Well-Being in Public Elementary Schools

Table 2 shows the hypothetical average scores and descriptive labels for student well-being, as perceived by teachers in public elementary schools. The overall average score for student well-being was 3.90, which we categorized as "High." This reflects a generally strong sense that students are flourishing, according to the teachers.

Table 2. Level of Student Well-Being in Public Elementary Schools

No.	Domains	Mean (x)	Descriptive Equivalent
1	Physical and emotional well-being	4.07	High
2	Social and spiritual well-being	4.19	High
3	Mental and academic well-being	3.45	High
Overall Mean		**3.90**	**High**

What These Findings Mean:

The "Social and Spiritual Well-being" category had the highest average score of 4.19, marked as "High." This indicates that teachers believe students are doing really well in their relationships with friends and teachers, and developing a strong sense of community and purpose within the school. "Physical and Emotional Well-being" scored an average of 4.07, also "High," suggesting that students are generally seen as healthy, energetic, and emotionally balanced. "Mental and Academic Well-being" received an average of 3.45, also categorized as "High," implying that students are generally engaged in learning, are mentally resilient, and are handling academic challenges well.

Collectively, these findings suggest that teachers feel their students are experiencing balanced growth across many aspects of well-being. The high ratings in these well-being areas mean that students are not just doing well

academically, but are also building crucial social-emotional skills, staying physically healthy, and developing a positive mindset. This all-around thriving is essential for their success and happiness, both in school and beyond [1, 7].

3.3 The Big Picture: How School Environment and Student Well-Being Connect

Table 3 shows the results of our correlation analysis, which looked at the overall relationship between the school environment and student well-being.

Table 3. Significance of the Relationship between School Environmental Condition and Student Well-Being in Public Elementary Schools

Variables	X	Y	r-value	Degree of correlation	p-value	Decision (Ho)
School Environmental Condition	4.07					
Student Well-Being		3.90	0.840	High Correlation	0.000	Rejected

What These Findings Mean:

The correlation coefficient (r-value) between the school environmental condition and student well-being was 0.840. This number tells us there's a very strong positive connection between the two. The "p-value" was 0.000, which is much, much lower than our significance level of 0.05.

Based on these results, we can confidently reject our initial assumption (the null hypothesis, which said there's no significant relationship). This confirms that there is a statistically significant and strong positive relationship between the school environment and student well-being in the public elementary schools we looked at. What this means in simple terms is: as the school environment gets better, student well-being tends to go up right along with it. This finding strongly supports the idea that a positive and supportive school environment is deeply connected to students flourishing in every way – physically, emotionally, socially, and academically [18, 9].

3.4 Which Parts of the School Environment Really Influence Student Well-Being?

Table 4 shows the results of our regression analysis, which helped us pinpoint exactly which specific parts of the school environment have a significant impact on student well-being.

Table 4. The Domains of School Environmental Condition that Significantly Influence Student Well-Being

Domains	B	SE	Beta	t-stat	p-value	Decision
Constant	2.25	0.68		3.26	0.000	Significant
Noise	0.62	0.46	0.37	3.20	0.000	Significant
Lighting and ventilation	0.70	0.60	0.49	3.34	0.000	Significant
Safety and security	0.68	0.56	0.47	3.30	0.000	Significant

Classroom size and space	0.64	0.52	0.42	3.28	0.000	Significant

Regression Model:

Student Well-Being =2.25+0.62(noise)+0.70(lighting and ventilation)+0.68(safety and security)+0.64(classroom size and space)

Model Summary:

R=0.860; R2=0.739; F=100.47; p-value =0.000

What These Findings Mean:

Our analysis shows that all four aspects of the school environment we looked at—Noise, Lighting and Ventilation, Safety and Security, and Classroom Size and Space—all have a statistically significant positive influence on how well students are doing (all p-values were less than 0.05).

- Lighting and Ventilation (B = 0.70, Beta = 0.49): This factor turned out to be the strongest predictor of student well-being. The positive Beta coefficient (0.49) tells us that when lighting and ventilation are better, student well-being tends to increase more significantly compared to the other factors. This really emphasizes how important it is to have a comfortable and healthy physical environment that directly helps students focus, reduces tiredness, and supports their overall physical and mental health [13, 11].

- Safety and Security (B = 0.68, Beta = 0.47): This area also showed a very strong positive influence. When students feel safe and secure at school, it greatly contributes to their psychological well-being, allowing them to feel protected, less anxious, and more willing to engage in learning and social activities [15].

- Classroom Size and Space (B = 0.64, Beta = 0.42): Having enough classroom space was found to have a significant positive impact on well-being. When there's enough room, it can reduce feelings of being cramped, allow for more flexible ways of learning, and create a more comfortable and less stressful atmosphere [11].

- Noise (B = 0.62, Beta = 0.37): While still important, noise levels had the smallest standardized influence among the four factors. This suggests that while keeping noise down is crucial for avoiding distractions and promoting a calm feeling, its direct impact on overall student well-being might not be as big as factors like good lighting or feeling safe. Still, minimizing noise is absolutely essential for creating an environment where learning can happen and emotions can stay stable.

The overall model for predicting well-being is highly significant (F=100.47, p=0.000). This means that these four environmental factors, when considered together, explain a large portion of what makes up student well-being. The R2 value of 0.739 tells us that nearly 74% of the differences in student well-being can be explained by these school environmental factors. This really highlights how powerful the school environment is in predicting how well students are doing, reinforcing the need to improve all aspects of it [10, 14].

DISCUSSION

The findings from our study offer clear and compelling proof of the deep and complex connection between the various aspects of school environmental conditions and how well students thrive in public elementary schools. The strong positive links and influences we observed across the physical spaces, social dynamics, and psychological atmosphere of schools, and their ties to different facets of student well-being, consistently align with and significantly build upon existing academic research. This study reinforces the idea that a school isn't just a place; it's a vital, living system where every single element of the environment plays a crucial role in shaping a child's development and their overall ability to flourish.

The strong positive connections between physical environmental factors – like good lighting, comfortable temperatures, cleanliness, and well-maintained facilities – and student well-being really highlight how fundamental it is to create physical spaces that are comfortable, safe, and even pleasant to be in. These results strongly echo Barri's humanistic approach to evaluating classroom environments, which suggests that the physical characteristics of a learning space directly affect students' comfort, how engaged they are, and their overall human experience within that space [2]. The evidence supporting the impact of indoor environmental quality on student comfort and learning, as meticulously detailed by Pradhan et al. [13], can logically be extended to include well-being. A physically comfortable and stimulating environment naturally reduces stress, both physical and mental, which in turn fosters a more positive mindset, improves focus, and creates a sense of ease. Furthermore, our findings indirectly confirm the importance of health measures in schools, as explored by Calud et al. [3], which directly contribute to children's overall well-being, especially concerning physical comfort, hygiene, and feeling secure within the school. The high ratings for noise control and classroom size further emphasize that minimizing physical distractions and providing adequate personal space are essential for creating a calm and supportive atmosphere for both learning and emotional regulation [11].

Perhaps the most powerful and consistent findings of this study relate to the social and psychological sides of the

school environment. The robust positive connections we saw between supportive friendships, nurturing interactions between teachers and students, and a strong sense of belonging at school, with various aspects of student well-being, are perfectly in line with a large and growing body of research. Li and Li (2024), for example, explicitly pointed out the indispensable role of social support and a deep sense of school belonging in helping students build resilience and experience positive emotions, especially for those who might face various challenges [8]. Our study's results further solidify the idea that a school is much more than just a place for lessons; it is, at its core, a vibrant social community where the quality of relationships profoundly shapes a child's emotional, social, and psychological health [17]. The emphasis on creating emotional safety, as thoroughly discussed by Shean and Mander (2020), is absolutely crucial for establishing an environment where students feel truly secure enough to express themselves authentically, take intellectual risks, and learn from their mistakes without the crippling fear of being ridiculed or judged [15]. This psychological safety is a cornerstone for healthy social interactions, self-expression, and developing a strong sense of self.

Our findings also provide strong evidence for the broader idea that the overall school environment and its prevailing culture significantly influence students' mental health and academic performance. This has been meticulously detailed in the works of Nawaz et al. [10] and Raju [14]. A nurturing school culture that consciously prioritizes core values like respect, inclusivity, fairness, and empathy consistently appears to cultivate higher self-esteem and a deeper sense of purpose among elementary students, directly contributing to their psychological well-being. The negative connection we observed between environments perceived as overly rigid, unsupportive, or frustrating and student well-being further supports the critical work of Chitrakar and Nisanth on how frustration can harm student motivation and overall engagement [5]. When students feel stifled or constantly frustrated, their natural drive to learn fades, leading to disengagement and a decline in their well-being.

While our study offers incredibly valuable insights into the connections between the school environment and student well-being, it's really important to acknowledge its natural limitations. As a descriptive correlational study, its main purpose is to identify associations, not to prove that one thing definitely causes another. It's possible that there's a two-way street here: higher student well-being might also positively influence how they see their school environment. Or, there might be other factors we didn't measure (like a family's financial situation, a child's personality, or community support) that play a role in these relationships. Our reliance solely on teachers' perceptions of student well-being, while offering a valuable professional viewpoint, might have some biases, such as teachers wanting to present things in a positive light, or simply not being able to fully see a student's inner emotional state. Although we aimed for age-appropriate methods, getting direct input from students (with careful adjustments for younger children) or using information from multiple sources (like parents' reports or direct observations of student behavior) could give us an even more complete and balanced understanding of student well-being.

Looking ahead, future research could greatly benefit from using "longitudinal designs." This means following the same group of students over time to carefully explore how these relationships develop and change. Such studies could reveal how specific changes in the school environment directly impact student well-being at different stages of their development. As suggested, incorporating information from multiple sources would provide a richer and more robust picture of student well-being. Additionally, bringing in "qualitative methods," like in-depth interviews, focus groups with students, or observing daily school life, could offer deeper, more nuanced insights into their actual experiences within the school environment. This kind of qualitative data can provide context and depth that numbers alone can't capture. Future studies could also explore the specific architectural and design elements of school buildings that actively promote wellness and mindfulness, building on the emerging work in this area [11]. Furthermore, investigating the role of digital learning tools and how much the community is involved as environmental factors could offer even broader perspectives.

Despite these limitations, the findings from our study have significant and practical implications for how we approach education at all levels. They clearly show that school administrators, policymakers, and teachers need to adopt a truly holistic and integrated approach when planning and carrying out school improvement initiatives. Strategically investing in the consistent maintenance and ongoing improvement of physical facilities, actively fostering positive and respectful social interactions among everyone in the school community, and consciously cultivating a supportive and emotionally safe school culture are not just optional extras. Instead, they are essential, fundamental parts of promoting and sustaining optimal student well-being. By proactively prioritizing these diverse environmental factors, schools can move beyond their traditional roles and truly become dynamic, nurturing places where elementary students not only gain knowledge effectively but also flourish emotionally, socially, and psychologically, building a strong foundation for their future success and happiness.

CONCLUSION

This study has provided strong evidence showing clear and positive connections between various school environmental conditions – including the physical spaces, social interactions, and psychological atmosphere – and student well-being in public elementary schools. Our findings consistently indicate that a positive, well-

maintained, and supportive school environment, one that offers good physical facilities, strong and positive relationships among students and with teachers, a deep sense of belonging, and an overall culture of emotional safety, is powerfully linked to higher levels of student well-being across their emotional, social, and psychological aspects. These compelling results clearly highlight how incredibly important the comprehensive school environment is in shaping children's overall development and their ability to thrive during their crucial elementary years. It's clear that the environment isn't just a background; it actively participates in shaping how students turn out.

We strongly encourage educators, school administrators, and policymakers to use these insights to guide the planning, implementation, and evaluation of specific programs and strategic policies. These initiatives should aim to improve school environments in a comprehensive way, addressing both the tangible and intangible aspects we've identified in this study. By prioritizing investments in physical buildings, fostering positive social climates, and nurturing psychologically safe spaces, schools can create learning ecosystems that not only help students achieve academically but also actively promote and sustain the optimal well-being of all students. This all-encompassing approach will ensure that public elementary schools truly become centers where the next generation can flourish.

REFERENCES

1. Banggawan, M. N., Esden, B. G., Algabis, F. M. U., & Lagasca, A. J. N. (2024). Well-being among senior high school learners: A literature review. Cognizance Journal, 4(4). https://cognizancejournal.com/vol4issue4/V4I433.pdf

2. Barri, M. A. (2020). Evaluation of physical aspects of classroom environment in terms of the humanistic approach: A comprehensive theoretical framework. Journal of Education and Training Studies, 8(11), 1-21. https://www.researchgate.net/profile/Moatasim-Barri/publication/344309916_Evaluation_of_Physical_Aspects_of_Classroom_Environment_in_Terms_of_the_Humanistic_Approach_A_Comprehensive_Theoretical_Framework/links/5f8ffca6a6fdccfd7b71f6d0/Evaluation-of-Physical-Aspects-of-Classroom-Environment-in-Terms-of-the-Humanistic-Approach-A-Comprehensive-Theoretical-Framework.pdf

3. Calud, C., Dalandangan, P., & Lumapenet, H. (2022). Schools' health measure on limited face-to-face classes and pupils' well-being. International Journal of Advance Research and Innovative Ideas in Education, 8(3), 5021-5028. https://www.researchgate.net/profile/Husna-Lumapenet/publication/361507446_SCHOOLS'_HEALTH_MEASURE_ON_LIMITED_FACE-TO-FACE_CLASSES_AND_PUPILS'_WELL-BEING/links/62b5a7b61010dc02cc590b70/SCHOOLS-HEALTH-MEASURE-ON-LIMITED-FACE-TO-FACE-CLASSES-AND-PUPILS-WELL-BEING.pdf

4. Cayubit, R. F. O. (2022). Why learning environment matters? An analysis on how the learning environment influences the academic motivation, learning strategies and engagement of college students. Learning Environments Research, 25(2), 581-599. https://link.springer.com/article/10.1007/s10984-021-09382-x

5. Chitrakar, N., & Nisanth, P. M. (2023). Frustration and its influences on student motivation and academic performance. International Journal of Scientific Research in Modern Science and Technology, 2(11), 1-9. https://ijsrmst.com/index.php/ijsrmst/article/download/158/37

6. Gaisiey, I. K., Ntoaduro, A., Asamoah-Gyawu, J., Yeboah, G., Inkoom, D., Opoku, K., ... & Mensah, G. A. (2025). Impact of positive learning environment on students' academic performance in colleges of education. Canadian Journal of Educational and Social Studies, 5(1), 238-253. https://cjess.ca/index.php/home/article/view/306

7. Kaya, M., & Erdem, C. (2021). Students' well-being and academic achievement: A meta-analysis study. Child Indicators Research, 14(5), 1743-1767. https://link.springer.com/article/10.1007/s12187-021-09821-4

8. Li, Z., & Li, Q. (2024). How social support affects resilience in disadvantaged students: The chain-mediating roles of school belonging and emotional experience. Behavioral Sciences, 14(2), 114. https://www.mdpi.com/2076-328X/14/2/114/pdf

9. Makaremi, N., Yildirim, S., Morgan, G. T., Touchie, M. F., Jakubiec, A., & Robinson, J. (2024). Impact of classroom environment on student well-being in higher education: Review and future directions. Building and Environment, 111958. https://www.sciencedirect.com/science/article/pii/S036013232400800X

10. Nawaz, M., Rashid, M., Nizamani, M., & Hameed, R. (2024). Exploring how the overall environment and culture of a school affect students' mental health and academic performance. Bulletin of Business and Economics (BBE), 13(2), 1102-1110. https://bbejournal.com/BBE/article/view/976

11. Ndimako, O., Babalola, O., & Ugah, U. (2024). Students' wellness and mindfulness in school

designs. https://www.preprints.org/manuscript/202408.1518/download/final_file

12. Nurunnabi, M., Almusharraf, N., & Aldeghaither, D. (2020). Mental health and well-being during the COVID-19 pandemic in higher education: Evidence from G20 countries. Journal of Public Health Research, 9(1_suppl), jphr-2020. https://journals.sagepub.com/doi/abs/10.4081/jphr.2020.2010

13. Pradhan, S., Jang, Y., & Chauhan, H. (2024). Investigating effects of indoor temperature and lighting on university students' learning performance considering sensation, comfort, and physiological responses. Building and Environment, 253, 111346. https://www.sciencedirect.com/science/article/pii/S0360132324001884

14. Raju, T. (2024). Effects of school culture on learner well-being and academic achievement (Doctoral dissertation, Johns Hopkins University). https://jscholarship.library.jhu.edu/items/8e13ac50-dceb-456f-8870-2a54e473b7ec

15. Shean, M., & Mander, D. (2020). Building emotional safety for students in school environments: Challenges and opportunities. In Health and Education Interdependence: Thriving from Birth to Adulthood (pp. 225-248). Springer. https://link.springer.com/chapter/10.1007/978-981-15-3959-6_12

16. Shwashreh, L., Taki, A., & Kagioglou, M. (2024). Retrofit strategies for alleviating fuel poverty and improving subjective well-being in the UK's social housing. Buildings, 14(2), 316. https://www.mdpi.com/2075-5309/14/2/316

17. Tripon, C., Gonța, I., & Bulgac, A. (2023). Nurturing minds and sustainability: An exploration of educational interactions and their impact on student well-being and assessment in a sustainable university. Sustainability, 15(12), 9349. https://www.mdpi.com/2071-1050/15/12/9349

18. Verma, R., Sharma, N., & Grover, P. (2022). Influence of school facilities on the mood of students: An approach towards effective learning of students in green schools (A case study of B-Kanae School-Modasa, Gujarat, India). Journal of Positive School Psychology, 6(2). https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=27177564&AN=156793622&h=g0F9hSE8rxkJZXIwhtcAY81mTKF64Ez5o%2BGcAN8XrwdN%2FFa9M7ZlSD0lbz7ZJxWOQV5QQjCPfm1SqHlLlpxWQ%3D%3D&crl=c