



OPEN ACCESS

EDITED BY

Maura Pilotti,
Prince Mohammad Bin Fahd University,
Saudi Arabia

REVIEWED BY

Russina Eltoun,
Prince Mohammad Bin Fahd University,
Saudi Arabia
Maryam Bojulaia,
Prince Mohammad Bin Fahd University,
Saudi Arabia

*CORRESPONDENCE

Maria Salud M. Delos Santos
✉ mmdelossantos5@up.edu.ph

RECEIVED 06 December 2024

ACCEPTED 03 March 2025

PUBLISHED 31 March 2025

CITATION

Estipona EP and Delos Santos MSM (2025)
Linking wellbeing to success: life satisfaction
on mathematics performance of Philippine
public high school students.
Front. Educ. 10:1540813.
doi: 10.3389/feduc.2025.1540813

COPYRIGHT

© 2025 Estipona and Delos Santos. This is an open-access article distributed under the terms of the [Creative Commons Attribution License \(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Linking wellbeing to success: life satisfaction on mathematics performance of Philippine public high school students

Elisa P. Estipona and Maria Salud M. Delos Santos*

College of Education, Cebu Technological University, Cebu, Philippines

This study examined the influence of Grade 11 students' life satisfaction domains—family, friends, neighborhood, school, and self—on their academic performance in mathematics in a secondary public school in Cebu City, Philippines. A quantitative descriptive-correlational research design was employed, with data collected from 184 respondents out of a population of 340 Grade 11 students. A 30-item questionnaire adapted from Schnettler et al. (2017) measured life satisfaction levels, while academic performance in mathematics was categorized based on school grading standards. Results indicated that students reported high satisfaction in the family and friends domains, while the neighborhood domain had comparatively lower satisfaction. Most students' mathematical performance fell within the Satisfactory and Fairly Satisfactory categories. Statistical analysis revealed no significant correlation between life satisfaction in the domains of family, friends, school, and self with mathematical performance; however, a statistically significant relationship was observed between neighborhood satisfaction and academic achievement in mathematics, suggesting that the immediate residential environment may modestly influence student performance. These findings highlight the role of external environmental factors in academic success, emphasizing the need for a supportive neighborhood setting. Based on the results, an enhancement plan was developed and recommended for implementation to help improve students' mathematical performance.

KEYWORDS

students' life satisfaction, mathematics academic performance, descriptive-correlational method, Cebu, Philippines

Introduction

Ensuring a good quality of life is increasingly recognized as crucial for positive life outcomes, encompassing healthy relationships, affordable housing, and effective security systems (Civitci and Civitci, 2015; Gamble and Garling, 2012; Veenhoven, 1996). This study investigated the often-overlooked correlation between overall life satisfaction and academic performance among Grade 11 students. Building upon Maslow's self-actualization theory and recent research associating high life satisfaction with positive outcomes, including academic achievement (Kim et al., 2021), the study aimed to explore the multifaceted relationship between students' life satisfaction and scholastic success in Mathematics.

Traditionally, life satisfaction has been viewed as an outcome rather than a predictor, and its role in influencing academic performance has been underexplored. This study challenged this perspective, positing life satisfaction as a potential determinant of academic success. The inquiry arose from the researcher's observations of a potential correlation between students' life satisfaction levels and their resilience and focus in the face of academic

challenges. While some studies have explored the connection between life satisfaction and academic performance, especially in university settings (Slavinski et al., 2021; Ramirez et al., 2021), there is a notable gap in post-pandemic research, particularly among secondary students.

Mathematics, as a fundamental discipline, significantly contributes to students' intellectual growth and career preparedness. It strengthens problem-solving abilities, logical reasoning, and analytical thinking, which are essential for success in fields like engineering, economics, technology, and the sciences (Yadav, 2019). Additionally, mathematical proficiency cultivates critical thinking and decision-making skills, enabling individuals to tackle real-world challenges effectively.

However, despite its importance, mathematics is frequently viewed as a challenging subject, with many students struggling due to anxiety and a lack of motivation (Purbaningrum et al., 2023). Research suggests that students' beliefs about their intelligence, influenced by parents, teachers, and peers, play a crucial role in shaping their attitudes toward mathematics. Therefore, identifying these factors and fostering a growth mindset is essential for overcoming barriers and improving learning outcomes.

The relationship between life satisfaction and academic performance in secondary education is complex and may vary depending on the context and the specific population studied. Some studies suggest a positive relationship between the two, while others find no significant correlation or even a negative relationship. Hence, further research is needed to better understand the intricate relationship between life satisfaction and academic performance among students in secondary education.

This paper was made to help lay the foundation of an enhancement plan containing intervening actions that shall help students, teachers, administrators, and other concerned stakeholders in achieving good teaching and learning performance and consequently good scholastic performance for the students. It is in this premise that this study was made and conducted. Using an adapted survey questionnaire (Schnettler et al., 2017), the study explored whether there was a correlation between students' level of life satisfaction and academic performance, and if so, what factors contributed to this relationship.

Theoretical background

The theoretical foundation of the study draws upon key psychological and educational theories that shed light on the intricate relationship between subjective wellbeing and scholastic success. The theories include Positive Psychology, Self-Determination Theory (SDT), Social Cognitive Theory, and Educational Expectancy-Value Theory. The legal bases for this include the different Department of Education (DepEd) orders that the government of the Philippines is employing concerning the study which include the 1987 Philippine Constitution: Article XIV of Sec. 1, Republic Act No. 10533, DepEd Order No. 8, s. 2015, and DepEd Order No. 42, s. 2016.

Positive Psychology forms the cornerstone of the theoretical framework, asserting that life satisfaction, as a dimension of overall wellbeing, plays a crucial role in human flourishing. This perspective, championed by Seligman (2011), posits that a positive psychological outlook is encompassed by positive emotions, engagement, relationships, meaning, and accomplishment—elements inherently linked to the academic experiences and achievements of students.

Situated in the context of positive psychology, the study of subjective wellbeing (SWB) has become a major area of inquiry (Eid and Larsen, 2008). Often considered synonymous with happiness in colloquial use, SWB has been defined as a higher-order construct that incorporates three related, but distinguishable lower-order constructs of global life satisfaction (LS), positive affect, and negative affect (Diener, 1984). LS has been defined as a person's cognitive evaluation of the positivity of life as a whole whereas positive affect refers to the frequency of positive emotions (e.g., joy, interest) experienced by a person over time, and negative affect refers to the frequency of negative emotions (e.g., anxiety, sadness) experienced over time (Diener, 1984).

Self-Determination Theory (SDT) provides further insights into the motivational aspects influencing academic performance. Developed by Ryan and Deci (2000), SDT posits that individuals have innate psychological needs for autonomy, competence, and relatedness. The study explores how the satisfaction of these fundamental needs contributes to overall life satisfaction, subsequently impacting students' motivation, engagement, and academic outcomes.

In the context of life satisfaction, autonomy involves feeling in control of one's choices and decisions, which correlates positively with greater life satisfaction (Steckermeier, 2021). Similarly, experiences of competence, such as achieving personal goals, contribute significantly to an individual's overall sense of satisfaction with life (Ryan and Deci, 2017). Moreover, the need for relatedness, or a sense of connection and belonging, has been consistently linked to higher levels of life satisfaction (Howard et al., 2023).

When examining academic performance through the lens of SDT, autonomy plays a crucial role in a student's motivation and engagement with their learning process (Ryan and Deci, 2020). Students who feel a sense of autonomy in their education, with opportunities for self-directed learning and decision-making, exhibit higher intrinsic motivation, leading to improved academic performance (Jehanghir et al., 2023). Additionally, the fulfillment of the competence need is pivotal in academic settings.

Social Cognitive Theory, as advanced by Bandura (1986), offers a comprehensive framework for understanding the reciprocal interactions between individuals, their environment, and their behavior. In the context of life satisfaction, this theory emphasizes the role of self-efficacy—the belief in one's ability to succeed in specific situations or accomplish tasks (Bandura, 1977). Higher levels of self-efficacy are associated with greater life satisfaction as individuals who possess a strong sense of self-efficacy are more likely to set challenging goals, persevere in the face of obstacles, and experience a sense of accomplishment, contributing to overall life satisfaction (Madiha and Akhouri, 2018).

Regarding academic performance, Social Cognitive Theory underscores the significance of self-regulation, observational learning, and environmental factors. Bandura highlighted that individuals learn not only through their direct experiences but also through observing others (Bandura, 1986). In an educational setting, this translates into students modeling their behaviors and learning strategies after successful peers or influential figures, shaping their academic performance (Wilson et al., 2020).

The application of Social Cognitive Theory to life satisfaction and academic performance underscores the importance of self-efficacy, observational learning, and self-regulation in shaping individuals' experiences and outcomes. Enhanced self-efficacy contributes

positively to life satisfaction by fostering a sense of mastery and accomplishment. Concurrently, the theory emphasizes the role of observational learning and self-regulation in academic settings, suggesting that individuals' behaviors, learning strategies, and academic achievement are influenced by their observations and their ability to regulate their learning process.

The Educational Expectancy-Value Theory, proposed by [Wigfield and Eccles \(2000\)](#), offers a framework that emphasizes how individuals' beliefs about their capabilities and the subjective values they place on tasks influence their motivation, choices, and subsequent outcomes in academic settings. In the context of life satisfaction, this theory underscores the importance of individuals' beliefs about their abilities and the values they assign to their educational pursuits.

When individuals perceive themselves as competent in academic endeavors and place high subjective value on their educational goals, they are more likely to experience a sense of fulfillment and satisfaction in life ([Wigfield and Eccles, 2002](#)). This suggests that higher levels of perceived competence and the valuation of academic goals positively contribute to an individual's overall life satisfaction ([Wigfield and Eccles, 2000](#)).

Regarding academic performance, the Educational Expectancy-Value Theory highlights the influence of beliefs about one's capabilities (competence beliefs) and the subjective values attached to academic tasks. Students who hold strong beliefs in their competence in specific academic domains are more likely to engage in those tasks persistently and perform better academically ([Weidinger et al., 2018](#)).

The application of the Educational Expectancy-Value Theory to life satisfaction and academic performance underscores the pivotal role of perceived competence and subjective task values. Perceiving oneself as competent in academic pursuits and assigning high values to educational goals positively impacts both life satisfaction and academic performance. Individuals who hold positive beliefs about their capabilities and value their academic endeavors are more likely to experience greater satisfaction in life and achieve better academic outcomes.

Research indicates a significant association between numerical proficiency and overall life satisfaction. Individuals with strong mathematical skills often achieve higher income levels, which in turn contribute to greater life satisfaction. A study published in *PLOS One* found that higher numeric intelligence correlates with increased income, leading to enhanced satisfaction with one's income and overall life ([Bjälkebring and Peters, 2021](#)). This suggests that mathematical competence not only facilitates better financial outcomes but also positively impacts an individual's subjective wellbeing.

The theoretical framework of the study integrates Positive Psychology, Self-Determination Theory (SDT), Social Cognitive Theory, and Educational Expectancy-Value Theory to explore the relationship between life satisfaction and academic performance in mathematics among Grade 11 students. Positive Psychology emphasizes the role of life satisfaction in human flourishing, suggesting that positive emotions, engagement, relationships, meaning, and accomplishment are linked to academic experiences and achievements. SDT posits that fulfilling innate psychological needs for autonomy, competence, and relatedness contributes to overall life satisfaction, which in turn influences motivation and academic outcomes. Social Cognitive Theory highlights the importance of self-efficacy—the belief in one's ability to succeed—in

shaping life satisfaction and academic performance. Educational Expectancy-Value Theory focuses on how individuals' beliefs about their capabilities and the value they place on tasks affect their motivation and academic success.

In the discussion of findings, these theories are applied to interpret the relationship between life satisfaction domains and academic performance. For instance, the study examines how satisfaction in various life domains—such as family, friends, neighborhood, school, and self—correlates with academic performance in mathematics. The statistically significant negative correlation between neighborhood satisfaction and academic performance aligns with Social Cognitive Theory, suggesting that environmental factors can influence academic outcomes. However, the lack of significant correlations between other life satisfaction domains and academic performance may indicate that factors like family, friends, and school satisfaction do not directly impact academic achievement in this context.

Despite the theoretical integration, there are inconsistencies and gaps in the application of these theories. For example, the study finds no significant correlation between family satisfaction and academic performance, which contradicts existing literature that suggests family-related life satisfaction can predict academic success. Similarly, the absence of significant relationships between self-satisfaction and academic performance challenges the notion that personal wellbeing directly influences academic outcomes. These inconsistencies highlight the need for a nuanced understanding of how different facets of life satisfaction interact with academic performance, suggesting that the relationship may be more complex than the theories alone can explain.

While the theoretical framework provides a comprehensive lens to examine the interplay between life satisfaction and academic performance, the findings reveal complexities that warrant further investigation. The inconsistencies observed suggest that additional factors, beyond those identified in the theoretical models, may influence academic outcomes. Future research could explore these complexities by considering other variables or by employing longitudinal designs to better understand the dynamics between life satisfaction and academic performance.

While the study is primarily grounded in these theoretical perspectives, its relevance is further supported by DepEd orders that emphasize the holistic development of students. DepEd Order No. 8, s. 2015, outlines policy guidelines on classroom assessment for the K to 12 Basic Education Program, emphasizing the importance of a holistic approach to assessment that considers not only academic performance but also the broader aspects of student development ([Department of Education, 2015](#)).

DepEd Order No. 42, s. 2016, on policy guidelines for daily lesson preparation in the K to 12 Basic Education Program, underscores learner-centeredness and the aim to develop the full potential of students. While not explicitly addressing life satisfaction, these orders indirectly align with the study's focus on the holistic development of students beyond academic achievements ([Department of Education, 2016](#)).

The Philippine Constitution of 1987, particularly Article XIV, Section 1, mandates the state to protect and promote the right of all citizens to quality education at all levels. This constitutional provision serves as the primary legal basis for the government's commitment to providing accessible and quality education, which is crucial for both life satisfaction and academic performance ([The Official Gazette, n.d.](#)).

Republic Act No. 10533, known as the Enhanced Basic Education Act of 2013 or the K to 12 Law, also serves as a fundamental legal framework for educational reforms in the country. This law, implemented by the DepEd, seeks to enhance the quality of basic education by extending the education cycle to 12 years, integrating kindergarten and adding two additional years to high school. The law aims to improve students' learning outcomes, skills development, and preparedness for higher education and employment, contributing to both academic performance and overall life satisfaction ([Congress of the Philippines, 2013](#)).

These legal frameworks established by the Philippine Constitution and various legislative acts, particularly Republic Act No. 10533 and the Education Act of 1982, form the basis for DepEd's initiatives and policies aimed at ensuring quality education, holistic development, and the enhancement of both life satisfaction and academic performance among Filipino students. It is essential to note that while DepEd orders provide a broad framework for education, specific directives on life satisfaction may not be explicitly outlined. The study aligns with the broader goals of fostering a comprehensive understanding of student wellbeing within the context of the Philippine education system.

Objectives of the study

This research assessed the life satisfaction and academic performance of the Grade 11 students in a public national high school in Lahug, Cebu City Division, Philippines for the School Year 2023–2024 as the basis for a developed enhancement plan.

Specifically, this study sought to answer the following sub-problems:

- 1 What is the level of satisfaction of the respondents in terms of the following domains: family, friends, neighborhood, school, and self?
- 2 What is the level of academic performance of the respondents in Mathematics?
- 3 Is there a significant relationship between the life satisfaction and academic performance of the respondents in Mathematics?
- 4 Based on the findings, what enhancement plan may be developed?

Statement of the null hypothesis

Based on the objectives of the study, the following null hypothesis was tested at a 0.05 level of significance:

Ho: There is no significant relationship between the life satisfaction and academic performance of the respondents in Mathematics.

Materials and methods

Research design

This research utilized the quantitative descriptive correlational design to determine the significance of the relationship between the

student's level of satisfaction in different domains – family, friends, neighborhood, school, and self and their performance in Mathematics.

The input of the study involved the survey of life satisfaction in the five determined domains. These inputs were vital in the generation of the relationship between the variables mentioned that was analyzed during the process stage that was later subject to implications and generalizations from the researcher.

The process involved the securing of permissions from the schools with regards to the conduct of the study. Once approved, the researcher proceeded with the data gathering through a survey. Once the data was already collected, data hygiene procedures was employed. Data hygiene involved implementing practices during data collection to prevent errors, ensuring consistency, and validating responses. Process phase also initiated data encoding, transforming raw responses into a standardized format where test-statistics were done for the interpretation, implication, and recommendations from the collected data.

From there, a developed Enhancement Plan was made to fill the gaps for the improvement of teaching and learning process. The purpose of this plan is to clarify what resources were required to reach the goal, formulate a timeline for when specific tasks needed to be completed and to determine the persons involved in the process.

Environment

The study was conducted in one identified public school under the Department of Education in Cebu City Division, Philippines. The school offers both junior and senior high schools for which Grade 11 students were randomly selected. Lahug National High School (Night) operated as an educational institution offering both junior and senior high school programs during evening hours. The school is situated at Gorordo Avenue in Lahug, Cebu City, and provides an ideal setting for the study. The geographical location and accessibility of the school facilitate ease of data collection.

Lahug, a prominent barangay in Cebu City, Philippines, presents a diverse urban landscape. It encompasses upscale residential areas, bustling commercial establishments, and significant educational institutions. Despite its urban development, Lahug faces challenges that impact residents' wellbeing. The community has experienced incidents such as landslides due to soil erosion from continuous rainfall and security concerns highlighted by occasional criminal activities. These issues underscore the complex interplay between rapid urbanization and the necessity for robust infrastructure and safety measures to enhance the quality of life for all residents.

Lahug had a population of 45,853 as determined by the 2020 Census, representing 4.76% of the city's total population. A significant number of residents live in informal settlements, particularly along riverbanks such as the Lahug River. In 2020, Cebu City officials identified over 1,000 informal settler families residing along these riverbanks, necessitating relocation to facilitate river widening and flood control projects. These informal settlements often lack essential services and infrastructure, contributing to lower neighborhood satisfaction among residents. The prevalence of such living conditions in Lahug may influence students' academic performance, as environmental factors play a role in educational outcomes.

Respondents

There were 184 randomly selected respondents from 340 public high school students with a total of 198 females and 142 males.

Table 1 presents the distribution of respondents in the study, with a total sample size of 184. Further, gender was controlled in this study despite the distribution of enrollment for both males and females. A total of 92 Females and 92 Males were randomly selected from the entire population of Grade 11 students. Gender biases have been recognized as influential factors in academic performance, notably seen in the stereotypes affecting young girls' achievements in math tests (Llorens et al., 2021). Furthermore, research has consistently pointed out gender disparities in life satisfaction, underscoring the necessity of considering and controlling for gender differences when analyzing satisfaction levels (Eriksson and Strimling, 2023).

Understanding these distinctions is crucial in grasping the nuances of life satisfaction among students. Lastly, gender bias in academia and the impact of gender on research performance and careers highlight the need to address gender biases in research (Van Den Besselaar and Sandström, 2016). Therefore, controlling for gender in the study will help ensure that the findings are accurate and unbiased.

Grade 11 respondents were chosen for this study due to the pivotal nature of this academic year, representing a transitional phase before their final year of secondary education. At this stage, students exhibit a level of maturity and stability in the high school environment, making it an opportune time to assess their academic performance and explore the correlation between their life satisfaction and academic achievements.

Instrument

The survey questionnaire used for determining the level of life satisfaction of the respondents was adapted from the study of Schnettler et al. (2017). It comprised two parts: Student's Profile and the Student' Life Satisfaction Survey itself. The Student's Profile included fields for the respondent's name (optional), age, and gender to provide demographic information. The Students' Life Satisfaction Survey consisted of 30 indicators related to various aspects of life satisfaction, organized in a Likert scale format from 1 to 5. The respondents rated their agreement or disagreement with each statement, where 5 indicated "Strongly Agree," 4 for "Agree," 3 for "Neutral," 2 for "Disagree," and 1 for "Strongly Disagree."

TABLE 1 Distribution of the respondents ($n = 184$).

Section	<i>f</i>	%
A	31	16.85
B	36	19.57
C	25	13.59
D	24	13.04
E	33	17.93
F	35	19.02
Total	184	100.00

To ensure the adapted 30-item questionnaire from Schnettler et al. (2017) was valid and reliable for Philippine public high school students, the researchers conducted a pilot test with 15 students. This process yielded a Cronbach's alpha of 0.924, indicating high internal consistency. No modifications were made to the original statements, as they were deemed applicable to the study's context. Only the demographic section was reformatted to align with the specific needs of the research.

The responses gathered from each indicator aim to gauge the level of satisfaction or dissatisfaction within various life domains. This instrument's design, derived from the Multidimensional Students' Life Satisfaction Scale, aims to capture nuanced aspects of respondents' life satisfaction, enabling a comprehensive understanding of their perceptions across different life domains. The questionnaire's structured format allows for systematic data collection, facilitating analysis to identify patterns and correlations between life satisfaction in different domains and the respondents' overall wellbeing.

The academic performance is another independent variable that is considered in the study. This variable was gathered through the individual Grade Point Average (GPA) of the students. These grades comprised of subjects in all of the eight subjects offered in public schools in the Education system of the Philippines where students are graded from 60 to 100.

Data gathering procedure

There were three parts in the implementation of this study which included the preliminary, data gathering, and the post data gathering stages. This was vital to have a systematic way of conducting the research. The careful planning and implementation of the study could lead to more reliable and ethically motivated results.

Preliminary stage

In the gathering of data, the researcher asked permission from the Department of Education – Cebu City Division Schools Division Superintendent through a request or transmittal letter to conduct a study among Grade 11 students in the selected public school in DepEd–Cebu City Division. Another letter of request to conduct the study was also be given to the designated Principal of the research environment.

Data Gathering Stage. When the consent was granted, the researcher prepared the questionnaire for distribution. To ensure better and accurate outcome, the questionnaire was administered personally by the researcher by making certain of the directions as well as in explaining to the respondents the purpose of the study. The researcher further informed the respondents that their answers would be kept with at most confidentiality. In determining the scholastic performance of the respondents, their average grades were retrieved from the school's registrar.

Post data gathering stage

After the data were collected, they were tabulated, collated, analyzed, and interpreted using the appropriate statistical treatment after a thorough data hygiene. The results were made basis for the interpretation, implication, generalization, and conclusion of the study. It was also important to keep confidentiality of the data by using codes or disposing data after using.

Statistical treatment

The responses of the respondents were subjected to the following statistical treatment:

Frequency counts and percentages were used to determine the number of students which belong to the levels of proficiency. Weighted Means were computed to get the average of all of the respondents in a particular part of the research questionnaire. The over-all weighted mean was the data needed to compute for the correlation of the academic performance to the subject of the study. Pearson's r was employed to test if there was a significant correlation between the level of life satisfaction and academic performance among the Grade 11 students of the selected public school in DepEd – Cebu City Division, Philippines.

The study's finding of a statistically significant relationship between neighborhood satisfaction and mathematics performance, contrasted with non-significant relationships in other life satisfaction domains, suggests that the neighborhood environment plays a unique role in influencing students' academic outcomes. To further elucidate this relationship, additional statistical analyses, such as regression analysis, could be employed.

Ethical considerations

It was made clear to the respondents that their participation in this study will be voluntary, and they will not be compelled to participate shall they believe detrimental to their interest. Furthermore, the participants will be informed that the research will be conducted solely for academic purposes and the data gathered from them will be exclusively used for such purposes. The researcher ensured the confidentiality of the data gathered relative to the personal information of the respondents and will not be disclosed to the public at any cause.

In compliance with the Philippines' Data Privacy Act of 2012 (Republic Act No. 10173), access to the data of the respondents of the study will be restricted to the researcher, ensuring that it is used only for academic purposes and is protected from unauthorized access or disclosure. The storage, handling, and disposal of data will strictly adhere to the guidelines outlined in the Data Privacy Act to maintain the privacy and security of participants' information.

Results and discussion

Level of life satisfaction of the respondents

This section discusses the Grade 11 students' life satisfaction across multiple domains, aligning with the research objectives outlined for the assessment at a public national high school in Lahug, Cebu City Division. The investigation focuses on delineating the respondents' satisfaction levels in key areas encompassing family, friends, neighborhood, school, and self-perception.

Level of life satisfaction in the family domain

The Grade 11 students' perceptions of life satisfaction within the intricate dynamics of the family domain are given in [Table 2](#).

The aggregate weighted mean of 3.67 indicates an overall satisfaction level, falling within the "Satisfied" range as per the established verbal descriptions. The indicators reveal varying degrees of satisfaction within specific aspects of family interaction, with higher satisfaction expressed in enjoying time with parents (4.26) and perceiving their family as better than most (4.11). Conversely, slightly lower satisfaction levels are noted in aspects like family getting along well together (3.20) and doing fun activities together (3.34), categorized as "Fairly Satisfied."

The variance in satisfaction levels within different family aspects resonates with the findings of recent research. A study on adolescent life satisfaction found that it is strongly influenced by family support and structure. Family structure, whether intact or non-intact and family affluence were identified as important factors affecting adolescent life satisfaction ([Zaborskis et al., 2022](#)). Another study highlighted the relationship between life satisfaction and parental support among secondary school students, emphasizing the significant impact of family support on adolescent life satisfaction ([Zuo et al., 2022](#)). Additionally, research has shown that satisfaction with family uniquely predicts global life satisfaction for students, further underlining the influence of family dynamics on overall life satisfaction ([State and Kern, 2017](#)).

The findings align with the broader consensus that family dynamics significantly impact adolescent wellbeing, emphasizing the importance of diverse family-related experiences in shaping overall life satisfaction among Grade 11 students ([Härkönen et al., 2017](#)). These studies collectively underscore the multifaceted nature of the relationship between family dynamics and adolescent life satisfaction, highlighting the need for a nuanced understanding beyond singular familial interactions.

Level of life satisfaction in the friends domain

The exploration of life satisfaction among Grade 11 students extends beyond familial realms into the dynamics of their friendships and social connections. This segment delves into the intricate tapestry of the "Friends Domain," seeking to unravel the varied dimensions that contribute to adolescents' contentment within their social circles, the results given in [Table 3](#).

An aggregate weighted mean of 3.78 indicates an overall sense of satisfaction, portraying a prevailing positivity among the respondents in their friendships. Notably, indicators such as 'having fun with friends' (4.08) and 'friends being nice' (3.74) depict significantly high satisfaction levels, indicating strong, positive peer interactions within this cohort. These findings resonate with the research of [Amati et al. \(2018\)](#), emphasizing the pivotal role of positive friendships in enhancing adolescents' life satisfaction. The results show that friendship, in terms of intensity (measured by the frequency with which individuals see their friends) and quality (measured by the satisfaction with friendship relationships), is positively associated to life satisfaction.

In adolescence, peer relationships often shape one's sense of belonging and emotional wellbeing. The positive perceptions captured in this table align with broader studies emphasizing the pivotal role of positive friendships in adolescents' lives. Research by [Blum et al. \(2022\)](#) underscores that fostering positive social connections contributes significantly to adolescents' happiness, social development, and overall wellbeing. The consistent satisfaction depicted across

TABLE 2 Level of life satisfaction in the family domain.

S/N	Indicators	\bar{x}	sd	Verbal description
1	I like spending time with my parents	4.26	0.79	Very satisfied
6	My family is better than most	4.11	1.11	Satisfied
11	I enjoy being at home with my family	3.94	1.04	Satisfied
17	My family gets along well together	3.20	1.11	Fairly satisfied
22	My parents treat me fairly	3.44	1.20	Satisfied
26	Members of my family talk nicely to me	3.39	1.03	Fairly satisfied
29	My parents and I do fun things together	3.34	1.19	Fairly satisfied
Aggregate weighted mean		3.67		Satisfied
Aggregate standard deviation			1.14	

4.21–5.00 Very Satisfied, 3.41–4.20 Satisfied, 2.61–3.40 Fairly Satisfied, 1.81–2.60 Dissatisfied, 1.00 - 1.80 Very Dissatisfied.

TABLE 3 Level of life satisfaction in the friends domain.

S/N	Indicators	\bar{x}	sd	Verbal description
2	My friends are nice to me	3.74	0.77	Satisfied
7	My friends are great	3.82	0.87	Satisfied
12	My friends help me if I need it	3.67	0.94	Satisfied
18	My friends treat me well	3.59	0.87	Satisfied
23	I have a lot of fun with my friends	4.08	0.90	Satisfied
27	I have enough friends	3.75	0.97	Satisfied
Aggregate Weighted Mean		3.78		Satisfied
Aggregate Standard Deviation			0.90	

4.21–5.00 Very Satisfied, 3.41–4.20 Satisfied, 2.61–3.40 Fairly Satisfied, 1.81–2.60 Dissatisfied, 1.00–1.80 Very Dissatisfied.

various facets of friendships in this table underscores the pervasive positivity characterizing these relationships, aligning with broader research affirming the significance of positive peer interactions.

It is vital to recognize that positive friendships serve as a crucial support system for adolescents navigating the complexities of social dynamics. The consistent satisfaction levels across multiple aspects of friendships reflect a generally positive atmosphere within these relationships among Grade 11 students. These findings reiterate the influential role of supportive and positive friendships in shaping adolescents’ perceptions of satisfaction within their social circles, echoing the notion that these connections are pivotal for their emotional wellbeing and overall life satisfaction.

Level of life satisfaction in the neighborhood domain

Within the expansive exploration of adolescent satisfaction, this segment scrutinizes the Grade 11 students’ perceptions of life

satisfaction within the neighborhood domain. The table outlines key indicators reflecting various aspects of their residential environment, offering insights into engagement opportunities, the quality of living spaces, and interactions within their immediate residential settings.

The Grade 11 students’ perceptions of life satisfaction within the neighborhood domain, focusing on specific indicators related to their residential environment are given in Table 4. The indicators cover diverse aspects such as the availability of engaging activities, satisfaction with the neighborhood, familial residence, liking for neighbors, and overall satisfaction with the place of residence.

The aggregate weighted mean of 3.19 indicates an overall “Fairly Satisfied” perception of the neighborhood domain among Grade 11 students. However, the relatively high standard deviation of 1.09 suggests variability in individual responses, indicating a range of satisfaction levels within the sample. This variation might imply diverse experiences and perspectives among the students regarding different aspects of their neighborhood.

The assessment of adolescents’ life satisfaction within the neighborhood domain delves into multifaceted aspects that shape their residential experience. This inquiry aligns with prior research exploring the significance of neighborhood satisfaction in adolescents’ overall contentment and wellbeing. Studies like those conducted by Mueller et al. (2019) underscore the influential role of the physical environment and social interactions within the neighborhood on adolescents’ psychological wellbeing and satisfaction. Their work delves into the importance of neighborhood environments as settings for adolescent subjective experiences, contributing significantly to their mental health and wellbeing.

By drawing upon established theories like Bronfenbrenner’s ecological systems theory and aligning with prior studies emphasizing neighborhood quality and safety, this examination expands the discourse on adolescents’ satisfaction within their residential settings. Understanding these intricacies not only provides insights for targeted interventions and enhancement plan but also underscores the significance of creating supportive, engaging, and harmonious neighborhood environments that foster adolescents’ overall wellbeing and satisfaction.

Level of life satisfaction in the school domain

An essential investigation of Grade 11 students’ educational experiences and perspectives is the life satisfaction survey conducted within the school setting is given in Table 5.

The overall aggregate mean of 3.63 indicates an “Satisfied” perception within the school domain, yet the moderate standard deviation of 0.95 suggests diversity in individual responses among the student cohort. Understanding students’ satisfaction within the school aligns with theoretical frameworks like Self-Determination Theory (Ryan and Deci, 2000) and Social Cognitive Theory (Bandura, 1986), emphasizing intrinsic motivation and environmental influences on student experiences within educational settings.

Research has shown that a positive school climate is tied to high or improving attendance rates, test scores, promotion, and graduation rates (Daily et al., 2020). A positive school climate is also associated with increased student engagement and academic achievement (Konold et al., 2018). Students with a positive attitude towards school

TABLE 4 Level of Life Satisfaction in the Neighborhood Domain.

Indicators	\bar{x}	sd	Verbal description
There are lots of fun things to do in my neighborhood	3.32	1.01	Fairly Satisfied
I like my neighborhood	3.01	0.99	Fairly Satisfied
My family's house is nice	3.50	1.16	Satisfied
I like my neighbors	2.72	0.98	Fairly Satisfied
I like where I live	3.40	1.12	Fairy Satisfied
Aggregate weighted mean	3.19		Fairly Satisfied
Aggregate standard deviation		1.09	

4.21–5.00 Very Satisfied, 3.41–4.20 Satisfied, 2.61–3.40 Fairly Satisfied, 1.81–2.60 Dissatisfied, 1.00–1.80 Very Dissatisfied.

and a strong sense of school belonging are more likely to perform better academically and experience a higher level of satisfaction in their learning environment (Rahman, 2019). Therefore, a positive school environment can contribute to students' life satisfaction and academic performance.

This analysis offers insights into the complex landscape of student perceptions within the school domain, pinpointing areas of strength and potential improvement. Integrating findings from established literature and related studies sets the groundwork for targeted strategies and interventions aimed at enriching students' educational experiences and overall satisfaction within their academic environment.

Level of life satisfaction in the self-domain

The personal domains and internal assessments of Grade 11 pupils become evident when life satisfaction is investigated within the context of self-perception. The key indicators that show how students assess different parts of their identity and self-concept are systematically laid out in Table 6. This section explores their opinions on social interactions, personal skills, physical beauty, self-worth, and receptivity to new experiences—all of which significantly influence their sense of self-satisfaction and wellbeing.

The Grade 11 students' self-perceived life satisfaction across various indicators within the self-domain are shown in Table 7. The aggregate weighted mean of 3.57, denoting an overall "Satisfied" perception within the self-domain among Grade 11 students, is indicative of a generally positive self-perception. However, the moderate standard deviation of 1.15 suggests variability in individual responses, illustrating the diverse range of self-perceptions within the student cohort. This variability in self-perceptions is significant as it can impact various aspects of students' academic performance, motivation, and overall wellbeing.

These findings suggest that the lower satisfaction levels related to social acceptance and physical appearance indicators in the study of grade 11 students may be indicative of the influence of these nuanced aspects of self-perception on their self-esteem and wellbeing. Understanding the impact of social acceptance and appearance evaluations on adolescents' self-esteem is crucial for addressing and supporting their overall wellbeing and satisfaction.

Research has shown that self-perceptions, also known as self-concept or self-esteem, can have a significant impact on academic

TABLE 5 Level of life satisfaction in the school domain.

Indicators	\bar{x}	sd	Verbal description
I learn a lot in school	3.94	0.88	Satisfied
I look forward to going to the school	3.82	0.85	Satisfied
I like being in the school	3.63	0.81	Satisfied
The school is interesting	3.67	0.90	Satisfied
I enjoy school activities	3.08	1.07	Fairly Satisfied
Aggregate weighted mean	3.63		Satisfied
Aggregate standard deviation		0.95	

4.21–5.00 Very Satisfied, 3.41–4.20 Satisfied, 2.61–3.40 Fairly Satisfied, 1.81–2.60 Dissatisfied, 1.00–1.80 Very Dissatisfied.

performance, motivation, and confidence (Shapka and Khan, 2018). Additionally, self-perceptions play a crucial role in guiding students' academic engagement and their ability to take on challenges. Students who have positive self-perceptions are more likely to be confident in their academic abilities and have higher academic achievement (Mathew, 2017).

Summary on the level of life satisfaction of the respondents per domain

The summary presenting Grade 11 students' life satisfaction in a variety of domains offers a concise but thorough look at how respondents view important aspects of their lives. The overview of students' satisfaction in five important domains—Family, Friends, Neighborhood, School, and Self are presented in Table 8.

The high satisfaction levels reported in the Family and Friends domains (WM: 3.67 and 3.78 respectively) underline the significant influence of close relationships on adolescents' wellbeing. Studies emphasize the pivotal role of family support and positive peer relationships in fostering adolescents' emotional resilience and overall satisfaction (Szcześniak et al., 2021). Research has shown that positive family and peer relationships are associated with higher levels of life satisfaction and emotional wellbeing among adolescents (Szcześniak et al., 2022).

In contrast, The Neighborhood domain (WM: 3.19) showcases a moderately lower satisfaction level, indicating a more nuanced perception of their immediate residential environment. Research has highlighted the impact of neighborhood settings on adolescent wellbeing, emphasizing the need for supportive and positive neighborhood environments (Wang et al., 2020).

The reported satisfaction level within the School domain (WM: 3.63) aligns with literature emphasizing the significance of a positive school environment in fostering academic engagement and students' overall wellbeing (Gonzales-Valdivia et al., 2022). This domain's satisfaction hints at favorable academic experiences contributing to students' contentment and overall life satisfaction. Research has shown that school satisfaction is an important variable associated with behavior, dropout, absenteeism, teacher-student relationship, engagement, and social environments, incurring positive behavioral changes (Wong and Siu, 2017).

The Grand Mean of 3.58, indicating an overall "Satisfied" perception across domains, signifies the interplay of various facets in

TABLE 6 Test of the significance of the relationship between the level of life satisfaction and academic performance in mathematics ($n = 184$).

Paired variables (Life satisfaction domain with academic performance in mathematics)	r -value	Strength of correlation	p -value	Result
Family domain	0.023	Very Weak Positive	0.752	Not Significant
Friends domain	-0.047	Very Weak Negative	0.528	Not Significant
Neighborhood domain	-0.153	Very Weak Negative	0.039*	Significant
School domain	0.095	Very Weak Positive	0.200	Not Significant
Self domain	-0.006	Very Weak Negative	0.941	Not Significant
Over-all life satisfaction in all domains and academic performance in math	-0.024	Very Weak Negative	0.751	Not Significant

TABLE 7 Level of life satisfaction in the self domain.

Indicators	\bar{x}	sd	Verbal description
I am fun to be around	3.36	0.98	Fairly Satisfied
There are lots of things I can do well	3.61	0.99	Satisfied
I think I am good looking	2.93	1.32	Fairly Satisfied
I like myself	4.01	1.18	Satisfied
Most people like me	2.86	0.84	Fairly Satisfied
I am a nice person	3.65	0.96	Satisfied
I like to try new things	4.55	0.72	Very Satisfied
Aggregate weighted mean	3.57		Satisfied
Aggregate standard deviation		1.15	

4.21–5.00 Very Satisfied, 3.41–4.20 Satisfied, 2.61–3.40 Fairly Satisfied, 1.81–2.60 Dissatisfied, 1.00–1.80 Very Dissatisfied.

shaping adolescents' overall wellbeing. Understanding these satisfaction levels within different life domains underscores the complexity of factors contributing to adolescents' life satisfaction and highlights the need for tailored interventions targeting specific domains. This analysis serves as a foundation for crafting interventions aimed at enhancing specific aspects of their lives to further elevate their overall wellbeing.

Level of academic performance in mathematics of the respondents

Table 9 summarizes the academic accomplishments according to the score ranges that are obtained from the official grades that students received in the first and second quarters of the 2023–2024 school year.

The weighted mean score of 83.13 indicates an overall satisfactory academic performance. The highest percentage of students fell under the Satisfactory category (26.63%), followed by Fair Satisfactory (26.63%), Very Satisfactory (21.20%), Outstanding (20.65%), and Did not meet the Expectations (4.89%).

Numerous studies emphasize the interconnectedness of academic achievement and overall life satisfaction among students. Research by Antaramian (2017) highlights the positive relationship between academic success and subjective wellbeing in adolescents, indicating that higher academic achievement often correlates with higher life satisfaction. This correlation suggests that students achieving outstanding or very satisfactory grades (90–100 and 85–89 scoring ranges, respectively) might experience higher levels of life satisfaction compared to those scoring lower.

The variability in academic performance levels, as seen in Table 9, correlates with existing literature that underscores the multidimensional nature of life satisfaction among students. Academic success serves as one facet influencing their satisfaction levels, alongside various other factors like social interactions, family dynamics, and personal experiences. This variation within academic performance categories further accentuates the complexity in understanding how academic achievements intertwine with students' overall satisfaction.

Significance of the relationship between the level of life satisfaction and academic performance in mathematics

The summary of the test of the significance of the relationship between students' level of life satisfaction along with their academic performance in Mathematics in the participating school are presented in Table 6. It presents the examination of the relationship between the Grade 11 students' life satisfaction across various domains and their academic performance in mathematics. The analysis utilized Pearson's correlation coefficient (r) and associated p -values to determine the significance of these relationships.

In exploring the association between life satisfaction within distinct domains and academic performance in mathematics, the findings reveal varying levels of significance. For instance, the relationship between life satisfaction in the family domain and academic performance in math ($r = 0.023$, $p = 0.752$) appears statistically insignificant, suggesting no significant correlation between these aspects. This seems to not align with studies like that of Vautero et al. (2020), which found that family-related life satisfaction might not strongly predict academic achievement. Similarly, the associations between life satisfaction in the friends domain, school domain, self domain, and overall life satisfaction across all domains, with academic performance in mathematics, also exhibit non-significant relationships ($p > 0.05$). These results also do not coincide with prior studies of Blum et al. (2022), Maxwell et al. (2017), and Calero et al. (2018), indicating that satisfaction in these domains is a direct predictor of academic success in math among adolescents. However, these results are supported by the study of Bückner et al. (2018) that suggest that low-achieving students do not necessarily report low wellbeing, and that high-achieving students do not automatically experience high levels of wellbeing.

Contrastingly, the relationship between life satisfaction in the neighborhood domain and academic performance in math appears statistically significant ($r = -0.153$, $p = 0.039$). This finding resonates

TABLE 8 Summary on the Level of Life Satisfaction of the Respondents per Domain.

Domain	WM	SD	Verbal Description
Family	3.67	1.14	Satisfied
Friends	3.78	0.90	Satisfied
Neighborhood	3.19	1.09	Fairly Satisfied
School	3.63	0.95	Satisfied
Self	3.57	1.15	Satisfied
Grand Mean	3.58	1.05	Satisfied

4.21–5.00 Very Satisfied, 3.41–4.20 Satisfied, 2.61–3.40 Fairly Satisfied, 1.81–2.60 Dissatisfied, 1.00–1.80 Very Dissatisfied.

TABLE 9 Academic performance of the respondents.

Level	Scoring range	f	%
Outstanding	90–100	38	20.65
Very Satisfactory	85–89	39	21.20
Satisfactory	80–84	49	26.63
Fair Satisfactory	75–79	49	26.63
Did not meet the Expectations	Below 75	9	4.89
Total		184	100.00

Average = 83.13, Standard Deviation = 3.42.

with research conducted by [Boxer et al. \(2020\)](#) emphasizing the influence of external environments, like neighborhoods, on academic outcomes. It suggests that satisfaction within the neighborhood context might modestly impact mathematical performance among Grade 11 students ([Wodtke and Parbst, 2017](#)).

The statistically significant relationship between neighborhood satisfaction and academic achievement in mathematics underscores the critical influence of one's immediate environment on educational outcomes. This finding aligns with Bronfenbrenner's ecological systems theory ([Bronfenbrenner, 1979](#)), which posits that a child's development is profoundly affected by their surrounding environments, including the neighborhood.

Research indicates that children residing in high-poverty neighborhoods often experience reduced growth in mathematics achievement. [Pearman \(2019\)](#) in the United States found that exposure to higher-poverty neighborhoods negatively impacted children's mathematical growth, equating to missing approximately three-quarters of a year of schooling over a five-year period. Similarly, in China, neighborhood socioeconomic status (SES) was positively associated with children's verbal and math test scores, suggesting that higher neighborhood SES contributes to better academic performance ([Lei, 2018](#)).

In the Philippines, particularly in urban areas like Lahug, Cebu City, many residents live in informal settlements with inadequate infrastructure and limited access to basic services. These conditions can adversely affect students' wellbeing and academic performance. The lack of resources and exposure to environmental stressors in such neighborhoods may hinder cognitive development and academic focus, leading to lower achievement in subjects like mathematics.

Collectively, these perspectives highlight the importance of neighborhood conditions in shaping educational outcomes. Improving neighborhood environments, through enhanced infrastructure, safety, and access to educational resources, could foster better academic

performance among students. Moving forward, future work on this thesis topic could delve deeper into the specific factors within the Neighborhood domain that influence academic performance. Exploring how aspects like safety, community engagement, or socio-economic factors interact with math achievements could provide a more detailed understanding of this relationship. Additionally, a longitudinal study tracking students' life satisfaction and academic progress over time could offer insights into the evolution of these dynamics.

This thesis contributes new knowledge to the field by emphasizing the intricate nature of life satisfaction's relationship with academic success. It challenges the assumption of a uniform correlation between life satisfaction in various domains and math performance, highlighting the need for a nuanced understanding of how different facets of satisfaction intertwine with scholastic achievements among adolescents.

However, the overall outcome underscores the complexity of life satisfaction's interplay with academic success, affirming its multifaceted nature. These findings challenge the notion of a direct, uniform correlation between life satisfaction and academic achievement, highlighting the need for a nuanced understanding of how different facets of satisfaction intertwine with scholastic performance.

Conclusion and recommendations

The research culminated in a clear understanding that while life satisfaction across multiple domains significantly impacts adolescents' overall wellbeing, its direct relationship with academic performance in Mathematics proved multifaceted. The neighborhood domain indicated a modest influence on mathematical achievement among these students.

This study, in conclusion, underscores the complexity of life satisfaction's interplay with academic success, offering valuable insights into the multifaceted nature of adolescents' wellbeing. It calls for continued exploration and nuanced investigations to unravel the intricate relationship between life satisfaction domains and academic achievements, shaping future research in this evolving field.

The findings from this study offer valuable insights for future research endeavors. The observed relationship between life satisfaction domains and academic performance in Mathematics presents several promising avenues for further exploration. One key recommendation is to conduct a more detailed examination of neighborhood dynamics. Understanding specific neighborhood characteristics—such as safety, community resources, and socioeconomic factors—and their direct impact on academic subjects could provide nuanced insights into the influence of neighborhoods on scholastic achievements.

The study's finding that neighborhood satisfaction influences mathematics performance offers valuable insights for shaping education policies and community development initiatives aimed at enhancing student outcomes. Recognizing the significant role that neighborhood environments play in students' academic achievements, policymakers can prioritize initiatives that improve neighborhood conditions to foster better educational results. One effective approach is the implementation of community-based programs that focus on enhancing neighborhood quality. By improving aspects such as safety, infrastructure, and access to resources, communities can create environments that positively influence students' perceptions and, consequently, their academic performance.

Longitudinal investigations tracking students' life satisfaction and academic progress over time could provide a comprehensive

understanding of developmental trajectories. Studying changes in life satisfaction domains and their correlations with fluctuations in academic performance over an extended period would illuminate the dynamic nature of these relationships.

Additionally, future research could focus on cross-domain analysis, exploring how satisfaction in one domain interacts with or influences another. This approach could reveal complex pathways impacting academic achievements, highlighting indirect effects of certain domains on scholastic success through others.

Supplementing quantitative data with qualitative methodologies, like interviews or focus groups, could enrich the understanding of students' subjective experiences. Qualitative insights into their perceptions regarding life satisfaction domains and academic performance would complement quantitative findings, offering a more comprehensive perspective.

Comparative studies across different age groups or cultural backgrounds would also be beneficial. Such studies could investigate whether the observed relationships between life satisfaction and academic performance are universal or vary based on cultural, demographic, or developmental factors.

Moreover, refining and validating measurement tools used to assess life satisfaction domains and academic performance could enhance the accuracy of future research. Developing more nuanced and comprehensive scales specific to different domains could yield more precise data for analysis. By focusing on these recommendations, future research can build upon the groundwork laid in this study, advancing our understanding of the intricate connections between life satisfaction domains and academic performance among adolescents.

The study's findings on the influence of neighborhood satisfaction on mathematics performance provide valuable insights for future research. However, several immediate limitations should be acknowledged and addressed in subsequent studies.

Firstly, sample representativeness is a critical concern. If the study's sample lacks diversity in terms of socioeconomic status, ethnicity, or geographic location, the findings may not be generalizable to the broader population. Ensuring a representative sample is essential to enhance the external validity of the results.

Secondly, potential confounding variables must be considered. Factors such as family socioeconomic status, parental involvement, and school quality can significantly influence both neighborhood satisfaction and academic performance. Without controlling for these variables, it is challenging to establish a clear causal relationship between neighborhood satisfaction and mathematics performance.

Additionally, the study's cross-sectional design limits the ability to infer causality. Longitudinal studies are needed to observe changes over time and better understand the directionality of the relationship between neighborhood satisfaction and academic performance. While the study offers valuable insights, future research should address these limitations by ensuring sample representativeness, controlling for potential confounding variables, and employing longitudinal designs to establish causal relationships.

Lastly, intervention-based research aimed at enhancing specific life satisfaction domains and assessing their impact on academic outcomes could be highly informative. Implementing targeted programs and evaluating their efficacy in improving certain domains and subsequent academic performance could offer practical insights for educators and policymakers. The output of the study shares the same goal as of this because the interventions included in the output of this research could

potentially improve the life satisfaction and academic performance of the students. It is then recommended that the developed enhancement plan of this study be adopted and implemented.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the participants or participants legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

Author contributions

EE: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Writing – original draft, Writing – review & editing. MD: Data curation, Formal analysis, Investigation, Methodology, Software, Supervision, Validation, Writing – original draft, Writing – review & editing.

Funding

The author(s) declare that no financial support was received for the research and/or publication of this article.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The authors declare that no Generative AI was used in the creation of this manuscript.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

- Amati, V., Meggiolaro, S., Rivellini, G., and Zaccarin, S. (2018). Social relations and life satisfaction: the role of friends. *Genus* 74:7. doi: 10.1186/s41118-018-0032-z
- Antaramian, S. (2017). The importance of very high life satisfaction for students' academic success. *Cogent Educ.* 4, 1–10. doi: 10.1080/2331186X.2017.1307622
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychol. Rev.* 84, 191–215. doi: 10.1037/0033-295X.84.2.191
- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Upper Saddle River, NJ: Prentice Hall.
- Bjälkebring, P., and Peters, E. (2021). Money matters (especially if you are good at math): Numeracy, verbal intelligence, education, and income in satisfaction judgments. *PLOS One*. 16. doi: 10.1371/journal.pone.0259331
- Blum, R. W., Lai, J., Martinez, M., and Jessee, C. (2022). Adolescent connectedness: cornerstone for health and wellbeing. *BMJ* 379:e069213. doi: 10.1136/bmj-2021-069213
- Boxer, P., Drawwe, G., and Caplan, J. (2020). Neighborhood Violent Crime and Academic Performance: A Geospatial Analysis. *Am. J. Community Psychol.* 65, 343–352. doi: 10.1002/ajcp.12417
- Bronfenbrenner, U. (1979). *The ecology of human development. Experiments by Nature and Design*. Cambridge, Massachusetts: Harvard University Press. doi: 10.2307/j.ctv26071r6
- Bücker, S., Nuraydin, S., Simonsmeier, B. A., Schneider, M., and Luhmann, M. (2018). Subjective well-being and academic achievement: A meta-analysis. *J. Res. Pers.* 74, 83–94. doi: 10.1016/j.jrp.2018.02.007
- Calero, A. D., Barreyro, J. P., and Injoke-Ricle, I. (2018). Emotional Intelligence and Self-Perception in Adolescents. *Eur. J. Psychol.* 14, 632–643. doi: 10.5964/ejop.v14i3.1506
- Civitci, N., and Civitci, A. (2015). Social comparison orientation, hardiness and life satisfaction in undergraduate students. *Procedia Soc. Behav. Sci.* 205, 516–523. doi: 10.1016/j.sbspro.2015.09.062
- Congress of the Philippines. (2013). Republic Act No. 10533 - Enhanced Basic Education Act of 2013.
- Daily, S. M., Smith, M. L., Lilly, C. L., Davidov, D. M., Mann, M. J., and Kristjansson, A. L. (2020). Using school climate to improve attendance and grades: understanding the importance of school satisfaction among middle and high school students. *J. Sch. Health* 90, 683–693. doi: 10.1111/josh.12929
- Department of Education (2015). April 1, 2015 DO 8, s. 2015 – Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program. Available at: <https://tinyurl.com/elisap1> (Accessed March 19, 2025).
- Department of Education (2016). DO 42, s. 2016 – Policy Guidelines on Daily Lesson Preparation for the K to 12 Basic Education Program. Manila, Philippines: Republic of the Philippines. Available at: <https://tinyurl.com/elisap4> (Accessed March 19, 2025).
- Diener, E. (1984). Subjective Well-Being. *Psychol. Bull.* 95, 542–575. doi: 10.1037/0033-2909.95.3.542
- Eid, M., and Larsen, R. J. (Eds.) (2008). *The science of subjective well-being*. New York, USA: The Guilford Press.
- Eriksson, K., and Strimling, P. (2023). Gender differences in competitiveness and fear of failure help explain why girls have lower life satisfaction than boys in gender equal countries. *Front. Psychol.* 14:1131837. doi: 10.3389/fpsyg.2023.1131837
- Gamble, A., and Garling, T. (2012). The relationship between life satisfaction, happiness and current mood. *J. Happiness Stud.* 13, 31–45. doi: 10.1007/s10902-011-9248-8
- Gonzales-Valdivia, J., Morales-García, W. C., Saintila, J., Huancahuire-Vega, S., Morales-García, M., and Ruiz Mamani, P. G. (2022). Translation and validation of the high-school satisfaction scale (H-SatP Scale) in Peruvian students. *Front. Educ.* 7:1003378. doi: 10.3389/feduc.2022.1003378
- Härkönen, J., Bernardi, F., and Boertien, D. (2017). Family Dynamics and Child Outcomes: An Overview of Research and Open Questions. *Eur. J. Popul.* 33, 163–184. doi: 10.1007/s10680-017-9424-6
- Howard, A., Gwenzi, G., Newsom, L., Geburu, B., and Wilke, N. (2023). The Relationship between Sense of Belonging and Well-Being Outcomes in Emerging Adults with Care Experience. *Int. J. Environ. Res. Public Health* 20:6311. doi: 10.3390/ijerph20136311
- Jehanghir, M., Ishaq, K., and Akbar, R. A. (2023). Effect of learners' autonomy on academic motivation and university students' grit. *Educ. Inf. Technol.* 29, 4159–4196. doi: 10.1007/s10639-023-11976-2
- Kim, E. S., Delaney, S. W., Tay, L., Chen, Y., Diener, E., and Vanderweele, T. J. (2021). Life Satisfaction and Subsequent Physical, Behavioral, and Psychosocial Health in Older Adults. *Milbank Q.* 99, 209–239. doi: 10.1111/1468-0009.12497
- Konold, T., Cornell, D., Jia, Y., and Malone, M. (2018). School climate, student engagement, and academic achievement: a latent variable, multilevel multi-informant examination. *AERA Open*. 4, 1–17. doi: 10.1177/2332858418815661
- Lei, L. (2018). The effect of neighborhood context on children's academic achievement in China: Exploring mediating mechanisms. *Soc. Sci. Res.* 72, 240–257. doi: 10.1016/j.ssresearch.2018.03.002
- Llorens, A., Tzovara, A., Bellier, L., Bhaya-Grossman, I., Bidet-Caulet, A., Chang, W. K., et al. (2021). Gender bias in academia: A lifetime problem that needs solutions. *Neuron* 109, 2047–2074. doi: 10.1016/j.neuron.2021.06.002
- Madiha, M., and Akhouri, D. (2018). Self efficacy and life satisfaction among young adults. *Int. J. Appl. Sci. Engin. Manage.* 4, 19–29.
- Mathew, J. S. (2017). Self-perception and academic achievement. *Indian J. Sci. Technol.* 10, 1–6. doi: 10.17485/ijst/2017/v10i14/107586
- Maxwell, S., Reynolds, K. J., Lee, E., Subasic, E., and Bromhead, D. (2017). The Impact of School Climate and School Identification on Academic Achievement: Multilevel Modeling with Student and Teacher Data. *Front. Psychol.* 8:2069. doi: 10.3389/fpsyg.2017.02069
- Mueller, M., Flouri, E., and Kokosi, T. (2019). The role of the physical environment in adolescent mental health. *Health Place* 58:102153. doi: 10.1016/j.healthplace.2019.102153
- Pearman, F. A. (2019). The effect of neighborhood poverty on math achievement: evidence from a value-added design. *Educ. Urban Soc.* 51, 289–307. doi: 10.1177/0013124517715066
- Purbaningrum, M., Ramadhan, S., and Thauzahra, R. (2023). Why is math difficult?: Beliefs that affecting students' mathematics skills. *Jurnal Paedagogy.* 10, 1000–1009. doi: 10.33394/jp.v10i4.8652
- Rahman, M. (2019). Secondary school students attitude towards Junior School Certificate (JSC) examination in Bangladesh. *Int. J. Educ.* 11, 161–168. doi: 10.17509/ije.v11i2.14746
- Ramírez, S., Gana, S., Garcés, S., Zúñiga, T., Araya, R., and Gaete, J. (2021). Use of Technology and Its Association With Academic Performance and Life Satisfaction Among Children and Adolescents. *Front. Psych.* 12:764054. doi: 10.3389/fpsyg.2021.764054
- Ryan, R. M., and Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am. Psychol.* 55, 68–78. doi: 10.1037/0003-066X.55.1.68
- Ryan, R. M., and Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, USA: The Guilford Press. doi: 10.1521/978.14625/28806
- Ryan, R. M., and Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: definitions, theory, practices, and future directions. *Contemp. Educ. Psychol.* 61:101860. doi: 10.1016/j.cedpsych.2020.101860
- Schnettler, B., Orellana, L., Sepúlveda, J., Miranda, H., Grunert, K. G., Lobos, G., et al. (2017). Psychometric properties of the Multidimensional Students' Life Satisfaction Scale in a sample of Chilean university students. *Suma Psicológica* 24, 97–106. doi: 10.1016/j.sumpsi.2017.06.001
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. California, USA: Free Press.
- Shapka, J. D., and Khan, S. (2018). "Self-Perception" in Encyclopedia of Adolescence. ed. R. J. R. Levesque (Cham: Springer). doi: 10.1007/978-3-319-33228-4_481
- Slavinski, T., Bjelica, D., Pavlovic, D., and Vukmirovic, V. (2021). Academic Performance and Physical Activities as Positive Factors for Life Satisfaction among University Students. *Sustain. For.* 13:497. doi: 10.3390/su130204
- State, T. M., and Kern, L. (2017). Life Satisfaction Among High School Students with Social, Emotional, and Behavioral Problems. *J. Posit. Behav. Interv.* 19, 205–215. doi: 10.1177/1098300717714573
- Steckermeier, L. C. (2021). The value of autonomy for the good life. An empirical investigation of autonomy and life satisfaction in Europe. *Soc. Indic. Res.* 154, 693–723. doi: 10.1007/s11205-020-02565-8
- Szcześniak, M., Bajkowska, I., Czaprowska, A., and Sileńska, A. (2022). Adolescents' self-esteem and life satisfaction: communication with peers as a mediator. *Int. J. Environ. Res. Public Health* 19:3777. doi: 10.3390/ijerph19073777
- Szcześniak, M., Mazur, P., Rodzeń, W., and Szpunar, K. (2021). Influence of life satisfaction on self-esteem among young adults: the mediating role of self-presentation. *Psychol. Res. Behav. Manag.* 14, 1473–1482. doi: 10.2147/PRBM.332788
- The Official Gazette. (n.d.). THE 1987 Constitution of the Republic of the Philippines – Article XIV. Available at: Available at: <https://tinyurl.com/elisap2> (Accessed March 19, 2025).
- Van Den Besselaar, P., and Sandström, U. (2016). Gender differences in research performance and its impact on careers: a longitudinal case study. *Scientometrics* 106, 143–162. doi: 10.1007/s11192-015-1775-3
- Vautero, J., Taveira, M., Silva, A., and Fouad, N. (2020). Family Influence on Academic and Life Satisfaction: A Social Cognitive Perspective. *J. Career Dev.* 48, 817–830. doi: 10.1177/0894845320902270

- Veenhoven, R. (1996). *The study of life-satisfaction*. Budapest, Hungary: Eötvös University Press. Available at: <http://hdl.handle.net/1765/16311>
- Wang, D., Choi, J. K., and Shin, J. (2020). Long-term neighborhood effects on adolescent outcomes: mediated through adverse childhood experiences and parenting stress. *J. Youth Adolesc.* 49, 2160–2173. doi: 10.1007/s10964-020-01305-y
- Weidinger, A. F., Steinmayr, R., and Spinath, B. (2018). Changes in the relation between competence beliefs and achievement in math across elementary school years. *Child Dev.* 89, e138–e156. doi: 10.1111/cdev.12806
- Wigfield, A., and Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemp. Educ. Psychol.* 25, 68–81. doi: 10.1006/ceps.1999.1015
- Wigfield, A., and Eccles, J. S. (2002). The development of competence beliefs, expectancies for success, and achievement values from childhood through adolescence. In: *Develop. Achieve. Motiv.* eds. A. Wigfield and J. S. Eccles. Academic Press. 91–120. doi: 10.1016/B978-012750053-9/50006-1
- Wilson, K. J., Long, T. M., Momsen, J. L., and Bray Speth, E. (2020). Modeling in the classroom: making relationships and systems visible. *CBE Life Sci. Educ.* 19:fe1. doi: 10.1187/cbe.19-11-0255
- Wodtke, G., and Parbst, M. (2017). Neighborhoods, schools, and academic achievement: a formal mediation analysis of contextual effects on reading and mathematics abilities. *Demography* 54, 1653–1676. doi: 10.1007/s13524-017-0603-1
- Wong, T., and Siu, A. (2017). Relationships between school climate dimensions and adolescents' school life satisfaction, academic satisfaction and perceived popularity within a Chinese context. *Sch. Ment. Heal.* 9, 237–248. doi: 10.1007/s12310-017-9209-4
- Yadav, S. (2019). Role of Mathematics in the Development of Society. *Int. J. Res. Anal. Rev.* 6, 295–298.
- Zaborskis, A., Kavaliauskienė, A., Dimitrova, E., and Eriksson, C. (2022). Pathways of Adolescent Life Satisfaction Association with Family Support, Structure and Affluence: A Cross-National Comparative Analysis. *Medicina (Kaunas)* 58:970. doi: 10.3390/medicina58070970
- Zuo, Z., Li, S., Liu, S., and Wang, Q. (2022). Life satisfaction and parental support among secondary school students in Urumqi: the mediation of physical activity. *PeerJ* 10:e14122. doi: 10.7717/peerj.14122