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Adolescent mental health and academic achievement: a correlational study of twelfth-grade students in a high-performing public senior high school in Jayapura city, Papua

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ABSTRACT

Adolescents' mental health generally influences academic accomplishment, but limited research about the eastern part of Indonesia and varying school environments are reported. Our research focused on adolescent psychological health and academic performance among twelve grade students in a top public senior high school located in Jayapura City, Papua, using a quantitative correlational approach. Cluster random sampling selected nine out of twelve whole classes of students from a 480-students cohort, resulting in 132 participants. Mental health was assessed by a 28-item, 4-point Likert type questionnaire including emotional health, psychological health, social health, and not having mental illness symptoms. Academic achievement was the average of grades recorded in report-cards. Data were normally checked and then correlation was done by Pearson product-moment (SPSS 23). The relationship was very weak and statistically insignificant, $r = 0.025$, $p = .778$. This means less than one percent variance is shared between two variables and the hypothesis was rejected. These results imply in a select population with high academic performance, such an association may have been diluted due to limitation of variance and also by some mediating processes that were not included in the model, and school counselling program could justify its existence on the student wellbeing basis alone rather than on the grades increase that are expected as a consequence of better mental health.



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Introduction

Roughly half of all lifelong mental disorders start during adolescence, which coincides virtually with the period spent in secondary school. Solmi et al. (2022) state that about half of psychiatric disorders start before age 18, while anxiety and depression disorders have a peak incidence during the mid-teen period. At the same time, those teenage years determine students' educational paths: the marks they get in their last years of secondary school will decide whether they can go for higher education or not and how employable job searchers they will be. In those areas of life where students' school life and personality development are intertwined, schools assume a different role: not only do they produce academic certificates but more and more often they also serve as centers for mental health support.

Mental health in this context refers to more than the mere absence of psychiatric illness. It is viewed as the ability of a person to reach a positive state, where he or she develops personally, manages life's stresses, works productively, and, by his or her actions, contributes to the community (World Health Organization, 2022). The notion is best and most comprehensive described by a full-state model which sees emotional, psychological, and social well-being as three different sides of the same concept of well-being which goes from a normal state to the presence of a psychological disorder without any relation (Keyes, 2002). A practical consequence of this is, as stated in the two-factor model literature that, low levels of symptoms and high levels of well-being do not always go hand in hand. Some university students can be free of symptoms, yet be in a situation of mental deterioration, or, the other way around they can be experiencing mental disorders and yet have satisfactory levels of mental wellbeing. The educational outcomes of students who are of these two profiles are meaningfully different (Greenspoon & Saklofske, 2001; Suldo, Shaffer, 2008; Xiao et al., 2021). The current study uses a measure that reflects fully the model, combining the areas of emotional, psychological, social wellbeing with a fourth item referring to a condition where a person is not affected by an mental illness (Keyes, C, 2002).

Concern for adolescents' mental well-being in Indonesia is a big worry and has become louder in the last ten years. According to nationwide basic health survey there was a growth in the number of mental emotional disorders in the population, residents aged 15 years and above changed from 6.0% in 2013 to the double of it, 9.8% in 2018, reported by the Directorate General of Mental Health (Ministry of Health, 2020). The first nationwide representative survey focused on the youth age group in 2022 showed that almost a third of Indonesian teenagers had shown signs of a mental disorder within the last year but only a handful had sought for support from professional service providers (Wahdi et al., 2022).

On one hand, we all are aware that the global pandemic has put us together in front of a bigger picture and according to pooled statistics, clinically relevant levels of depressive and anxiety symptoms in children and adolescents have increased roughly twofold globally during the lockdown time (Racine et al., 2021). On the other side, Indonesian media have recorded a similar impact nationally with their reports of elevated anxiety, social isolation, and family and peer interaction limiting factors among secondary school students (Ningrum, 2022).

To start with, the issue in Papua definitely needs the closest focus. Local health data estimates mental health disorders among residents over 15 years in Jayapura City at 2.18% (Kementerian Kesehatan Republik Indonesia, 2018) whereas the doctors working at the psychiatric hospital there consider their department's mental health problems to be grave. They observe that most of the patients coming there are working-age adults and that they are often coming with fairly to very severe disorders (Jubah.id, 2023). Still, compared to other Java provinces like Java, adolescent mental health is very rarely the focus of empirical mental health literature in Papua. We cannot make generalisations based on findings in other areas because culturally, administratively, and even educationally, Papua is different, and therefore such differences may directly impact on issues like mental health.

Academic performance is generally taken to be the observable consequence of learning, which is then represented using symbols, digits, or descriptors by the school to indicate the degree of achievement over a specified period. Besides these, factors are conventionally divided into internal ones, which relate, for example, to the body condition, motivation, interest, capabilities, and state of mental health, and external ones such as the school atmosphere, family support, and the general social background. Recent studies also confirm that motivation, learning strategies that are self-regulated, and mental condition rank among factors that explain attainment variation most strongly, and that the main channel through which they exert their influence is students' engagement with the teaching rather than the direct effect.

The real-life connection between these two factors is definitely less clear than it is commonly presented to us. By putting the different studies together it was found that student mental health and the grades they get at university have a positive but a slight connection, which is the case even though the students' physical or academic environment has a significant variation in the students' mental health. Looking at the data over several years it appears that mental health is to a certain degree a predictor of future academic success. However, the changes the factors can account for are quite tiny, and besides the mental health being a predictor of academic performance the other way around is also possible (basically a kind of mutual interaction, rather than only one affecting the other), as was the conclusion found by Gómez-Baya et al., 2018; Steinmayr et al., 2018. An evaluation of the meta-study of students' subjective wellbeing and achievement indicated that, although these have a weak relationship, the correlation highly depends upon what kind of achievement measure one uses (Bücker et al., 2018). When data about the students and teachers have been analyzed over a large scale using big data it has often been found an effect only when the samples are the biggest ones, but the size of the effect is very limited to what people consider meaningful. (Marrone et al., 2024) On the other hand, research regarding intervention also leads in the same direction. Social and emotional learning activities in the schools at a very broad level have shown positive effects on the emotional and social aspects of students as well as on the school activities, but academic improvement has been the smallest part of the gains if we consider all the outcomes

together (Cipriano et al., 2023). Thus, clinical and educational experts have warned against overrating the mental health attainment relationship or considering it as natural (Lee et al., 2024).

Two points in the existing research help point out the gap addressed here. One is, there are practically no quantitative findings concerning this issue that have been conducted among students of senior secondary in Papua. Another one is that the association has hardly ever been discussed in contexts of selective, uniformly high-performing schools, where the range of achievement is further narrowed by admission and institutional culture.

Both characteristics can be found in Senior Hight School 1 Kota Jayapura, a public senior high school in Abepura District whose student achievement are frequently the best in province and national levels while the grade averages fall mostly in the good category. However, none of the previous papers has explored the psychological factors that could have explained such excellent performances of students in this school. In fact, regardless the nature of the result of testing such an established relationship, the situation described above offers us valuable information if found to be present, this will indicate how far this relationship goes; if it is absent, this will show under what conditions only the relationship works. This section presents the conceptual map of the study that shows the major themes (or research focus/area) together with variables identified as potentially relevant but not actually measured by the study, etc.

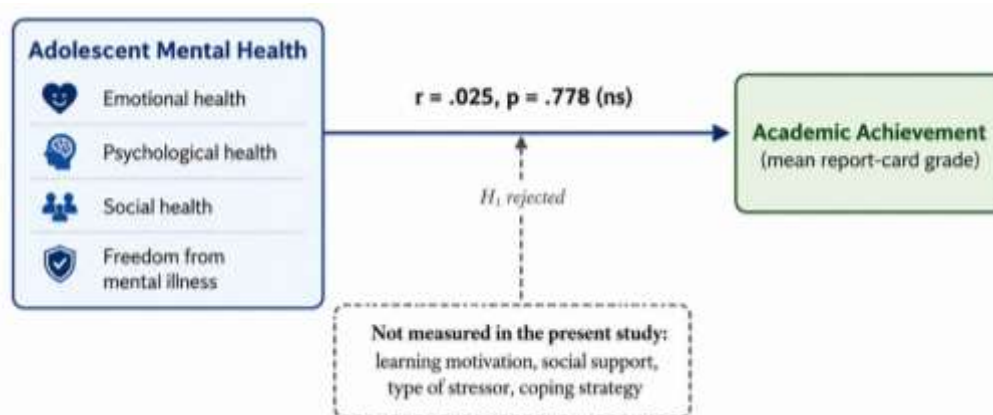


Figure 1. Conceptual Framework of the Study

The aim of this research was to examine if there is a connection between teenager's mental well-being and how well the students perform academically of the 12th grades in Senior High School 1 Kota Jayapura. The hypothesis is basically that the mental health of an adolescent has a strong connection with how well they get their homework done, and it is a reflection of the main idea on which the study was conducted. The research hypothesis, apart from the two variables mentioned in this paper, did not introduce any other variable.

Method

Our research method was primarily quantitative, employing a correlational model. Quantitative research involves data that have numerical formats and are analyzed using statistical methods. A correlational design aims to reveal how strongly and what kind of relationship (positive or negative) variables hold while keeping one another intact (Sugiyono, 2013). Besides, the research method was cross-sectional which meant that we only collected data once and could not establish a direction of the association or a cause-effect relationship between mental health and learning outcomes.

The study was carried out at one senior high school 1 city Senior High School that is situated in Abepura District, Jayapura City, Papua. The site has been chosen purposively since it is one of the schools that can get high scores of their students on both provincial and national levels in Jayapura city so that it is a field of study how high achievement is accompanied with psychological variables.

The population was composed of students of Senior High School Kota Jayapura, particularly those who were studying in their 12th grades. This number of 480 students was the cohort used and it was spread out in twelve intact classes which became the sampling frame. Clustering sampling was done and it works such that the entire population can be divided into clusters (based on a real existing characteristic) and then, the clusters are randomly selected for the study of the entire population (Sugiyono, 2013). Intact classes have been the clusters. Nine of the twelve 12th-grade classes have been selected and the classes' implementation was being

organized with the help of the school guidance and counselling teachers and the class-teachers of the respective classes. We finally, have an analysable sample of 132 students. The reason 12th grade was selected lies in the fact that these are students who have completed the maximum time period of studying and therefore, their results of the studies have been recorded, and these are the time they are close to the terminal examination which is a phase where the academic workload and the psychological burden are both maximum. The sampling and data collecting sequence is represented in Figure 2.

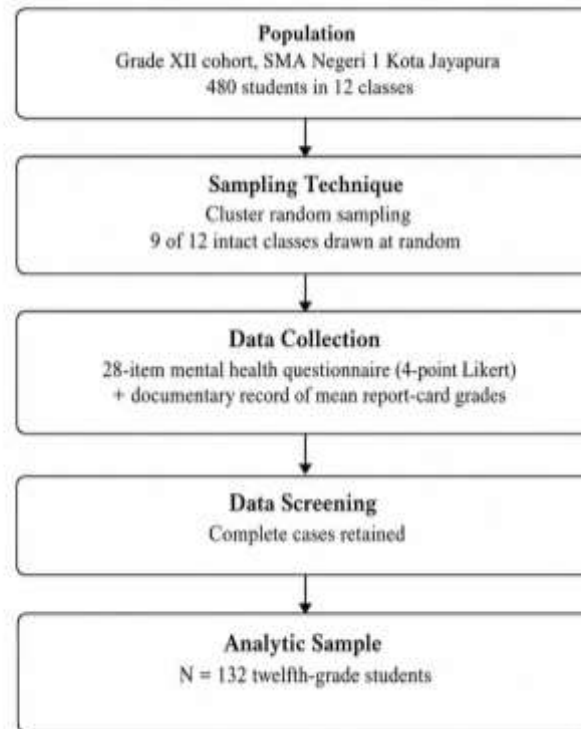


Figure 2. Sampling and Data Collection Procedure

Adolescents' mental health levels were assessed through a closed-ended questionnaire that the research team developed based on four dimensions of adolescent mental health: emotional health, psychological health, social health, and the absence of mental illness (Ningrum, 2022). The survey instrument consisted of 28 statements, 17 of which were positive items and 11 were negative items, so that the four categories were equally represented and seven items per group. Response was done by four-point Likert-type scale with the options "strongly agree", "agree", "disagree", "strongly disagree"; the four-point format is selected on purpose to eliminate the neutral centre and minimize the central-tendency responding. Positive statements were rated starting with 4 to 1, negative statements were reverse-scored so that high total scores reflect more positive mental health. Respondents were briefed at the very beginning of the questionnaire on the nature of the instrument: that it is not a test, that no answer is wrong, and that the participants' answers will be kept confidential. The complete item matrix is detailed in Table 2.

The concept of academic achievement was turned into observable measures by examining different materials and documents. Document analysis is an unobtrusive way to gather information since data is derived from various sources that already record facts of interest for research. The result here, achievement score for each participant, was simply the mean of all their report-card grades, which had been compiled from the real classroom record book kept by the school. The fact that data was taken from the institution (not individual self-reports) ensured that the predictor and outcome were independently obtained, thereby, minimising the common-method variance that may exist between them (Podsakoff et al., 2003).

Data collection was conducted during regular school hours and was done with the permission of the school principal. We asked the questionnaires in the classes chosen and after the questionnaires were filled the same day the researchers and the teachers who were in charge returned them, while individual completing was done under the supervision of both researchers and the teacher-accompanying. Then grade achievement data were obtained from the grade register of the students and questionnaire records were matched accordingly.

Data were quantitatively analyzed with the help of IBM SPSS Statistics version 23. The analysis was done in two stages: normality was tested in order to make sure that the distributional assumption necessary for

parametric correlation was satisfied, and then, the research hypothesis was tested through the use of the Pearson product-moment correlation coefficient. The level of significance was predetermined to .05, two-tailed. In order that the outcome could be fully comprehended, the coefficient of determination, and the 95% confidence interval for the correlation were obtained by means of Fisher's *z* transformation, from the published coefficient and the number of samples. Besides that, to find out the minimal detectable population correlation, with 80% power, sensitivity analysis was carried out. Such computational techniques have purely analytical character and don't yield any new data.

The research strictly complied with the ethical guidelines for conducting research involving human subjects. Written consents were acquired from Faculty of Teacher Training and Education, Universitas Cenderawasih, as well as the school head of Senior High School 1 Kota Jayapura, before starting data gathering. Study objectives were conveyed to the participants, it was explained that they could freely choose to take part in or not and leave anytime without any penalty, and they were promised that their personal details and academic materials will be kept confidentiality, only summarized results will be shared, and everything will be done only for academic purposes. Moreover, none of the study results contain any trace of personal identification.

Results and Discussions

Table 1 summarises the composition of the sample and the sampling frame from which it was drawn. Of the twelve intact twelfth-grade classes constituting the grade cohort, nine were selected by cluster random sampling, and 132 students from those classes provided complete data, representing 27.5% of the 480-student cohort.

Table 1. Composition of the sampling frame and the analytic sample

Characteristic	Category	n	%
Grade level	Grade XII	132	100.0
Classes in grade cohort	Intact classes	12	100.0
Classes sampled	Intact classes	9	75.0
Students in grade cohort	Sampling frame	480	100.0
Students sampled	Analytic sample	132	27.5
School	Public senior high school	1	–

The mental health instrument and its dimensional structure are described in Table 2. Each of the four dimensions was represented by seven items, giving a balanced blueprint across the construct, and each dimension combined favourable and unfavourable items so that acquiescent responding would not systematically inflate any single subscale.

Table 2. Blueprint of the adolescent mental health questionnaire

Dimension	Favourable items	Unfavourable items	Total items
Emotional health	1, 2, 4, 5, 7	3, 6	7
Psychological health	8, 9, 11, 13	10, 12, 14	7
Social health	15, 16, 18, 20	17, 19, 21	7
Freedom from mental illness	22, 24, 25, 27	23, 26, 28	7
Total	17	11	28

Table 3 presents the measurement characteristics of the two study variables. The normality assumption required for parametric correlation was examined prior to hypothesis testing and was satisfied, permitting the use of the Pearson coefficient. Distributional summary statistics for the two variables were not reported in the primary analysis output and are consequently not restated here.

Table 3. Measurement characteristics of the study variables

Variable	Data source	Scale	N
Adolescent mental health	Self-report questionnaire	28 items, 4-point Likert	132
Academic achievement	School grade register	Mean report-card grade	132

The test of the research hypothesis is reported in Table 4. The Pearson product-moment correlation between adolescent mental health and academic achievement was $r = .025$, with a two-tailed significance value of $p = .778$, well above the conventional .05 criterion. The relationship between the two variables was therefore not statistically significant, and there is insufficient evidence of a linear association between adolescent mental health and academic achievement in this sample.

Table 4. Pearson product-moment intercorrelation between the study variables

Variable	1	2
1. Adolescent mental health	—	
2. Academic achievement	.025	—

Because a non-significant result is uninformative without an indication of the precision of the estimate, the magnitude and interval associated with the observed coefficient were derived from the reported statistics and are summarised in Table 5. The coefficient of determination was $r^2 = .0006$, meaning that adolescent mental health and academic achievement shared approximately 0.06% of their variance. The 95% confidence interval for the correlation ran from $-.147$ to $.195$, an interval that comfortably contains zero and excludes any correlation of medium magnitude in either direction. The sensitivity analysis indicated that, with $N = 132$ and $\alpha = .05$ two-tailed, the design had 80% power to detect a population correlation of approximately .24 or larger; power to detect a true correlation of .10 was only .21, whereas power to detect a correlation of .30 was .94.

Table 5. Summary of findings and derived effect-size indices

Index	Value	Interpretation
Pearson r	.025	Negligible
Significance (2-tailed)	.778	Not significant
Coefficient of determination r^2	.0006	0.06% shared variance
95% CI for r	$[-.147, .195]$	Contains zero
Minimum detectable r (80% power)	.24	Medium–small effects detectable
Research hypothesis	Rejected	No significant relationship

Note. $N = 132$. r^2 , the confidence interval, and the sensitivity estimate are analytic derivations of the reported coefficient and sample size; no additional data were introduced. The confidence interval was obtained via Fisher's z transformation.

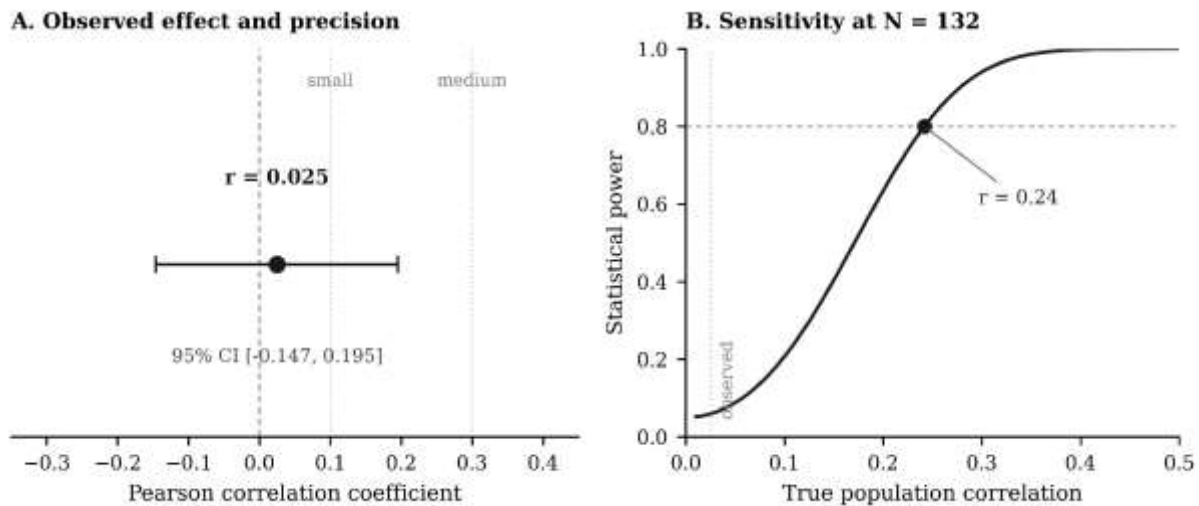


Figure 3. Observed correlation with 95% confidence interval (Panel A) and statistical sensitivity of the design (Panel B)

This project was carried out in order to see if mental health of adolescents has a relation with academic achievement and how far the two variables correlate with each other in twelfth class students from one particular well-functioning publicly supported senior high school in the city of Jayapura. The final outcome showed a very low correlation which was also statistically non-significant; $r = .025$, $p = .778$, and thereby the study hypothesis was rejected. The result of the study is quite straightforward; it simply means the self-reported mental health of a student is not very telling about what his or her academic average (grade point) would be.

This result is contradictory to what we have stated in the introduction and to a collection of Indonesian research findings that the mental well-being is correlated with improved learning results whereas mental illness can be a motivational and achievement hindrance (Fikri, 2021; Yasipin et al., 2020). In addition, these data contradict the meta-analytic literature which showed evidence of overall positive effect (Bas, 2021). Nevertheless, it is quite evident that even after thoroughly reviewing the magnitudes in those documents the contradiction is not very large. Correlative associations between wellbeing and academic performance presented together by synthesizers are rather low-sized than high (Bücker et al., 2018); universal SCL interventions produce the most conservative improvements in their outcome category among others (Cipriano et al., 2023). System-wide administrative analyses that have found correlations are mainly the ones where results were not found because of large sample sizes (Marrone et al., 2024). Therefore, given the literature's main tendency of tiny effects, it is expected that some individual studies would have no effect found. Consequently, rather than considering the current finding as an outlier which needs special interpretation, this is more reasonably seen as the distribution element.

The main methodological factor that probably led to the null finding was limiting the range in the outcome variable. They chose the research site precisely because their students regularly get distinctions in provincial and national assessments whereas their grade averages mainly fall in the good category. Such a competitive institution narrows down the variance through setting the admissions criteria, academic culture, and grading practices that mainly focus on the upper section. Being a standardized covariance, a correlation is affected by any limitation of variance in one or the other variable, resulting in the coefficient to be underestimated, no matter there is a strong relationship underlying that in the population as a whole (Sackett et al., 2007). The same relationship could easily be found in a sample where there is variation of selectivity level from different school. This point does not save the hypothesis *ex post facto* but is a fact of life in the study design that needs readers who refer the estimate to keep in mind it also limits generalizing to similarly selective contexts.

Turning to the design's sensitivity, another point worth reflecting on is that a study with 132 participants is well powered to detect a medium-sized correlation, and 30% correlation can be detected 94% of the time by the study, whereas the power is only 21% for 10% correlation. Effect sizes in the literature tend to be small, suggesting that only with a very large study would it be possible to detect the real association predicted by the theory. The consequence is illustrated by the confidence interval: it means that population correlations between .147 to .195 is also quite possible. Although we are reasonably confident not to be mistaken in excluding either a medium or a large positive association, a real slight association is still a possibility. It is a key difference between a non-significant result and evidence of the absence of a relation. It is well-documented that treating

them as the same is an inferential mistake (Amrhein et al., 2019; Wasserstein & Lazar 2016). The proper interpretation is that no relationship has been found and that a small effect still exists.

A third possibility is that measurement sensitivity is responsible for the observed correlation. This mental health measure was a 28-item self-report questionnaire that consists of statements on emotional control, social ease, and psychological coping in a generalised way. Instruments of this nature tend to register wide and stable traits that a person perceives themselves to have rather than capturing transient, near situations, such as stress, poor sleep, or worrying about your performance. The way these internal mental states most likely hinder learning is very difficult to grasp. Classroom-based self-reports further run the risk of being biased through socially desirable responding, especially with regard to questions on stigmatised topics. As a result of this tendency to underreport undesirable behaviour and exaggerate desirable traits one ends up with a situation that is not very different from an ideal scenario. It is, therefore, entirely conceivable that due to the low internal consistency of the measuring instrument with the population that one could get the same results by accident. A paper of Taber (2018) argues that one should give reporting of reliability coefficients a lot of weight when interpreting correlations based on scales.

The selection of the achievement indicator should be subjected to the same degree of scrutiny. Mean report-card grades compile and summarize results of different disciplines, teachers, and forms of assessment over a long time, and they include a teacher's view of the student's effort, involvement, and behaviour together with an objective measure of competence. Such a summary removes the very short-term peaks and valleys of performance in which a mental health issue would probably surface. A student suffering from a stress attack could, for instance, be absent from class, delay homework and submission, or perform badly in a specific exam and still maintain a solid overall average. The use of indicators that reflect such disturbances, absence record, assessment completion, or variability from term to term, might indicate a relationship that a composite average hides.

Furthermore, in terms of measurement and in the theoretical model tested, this research was quite minimalist in nature, only involving a single direct path between two variables. It turned out that the main paper had anticipated exactly this limitation, when describing that the link could be non-linear or mediated by other variables not explored here, like learning motivation, social support, characteristics of the stressor, and coping style. This interpretation has been confirmed by the latest theories. In general, it is believed that psychological state can influence academic success via the motivational and self-regulatory processes that affect student interaction with the curriculum. Psychological factors rarely have direct influences; rather, they indirectly affect accomplishment. When motivation and coping are good, they can be a kind of 'shield' that prevents psychological stress from having harmful educational outcomes. The phenomenon is clearly illustrated in the pattern found in the data where different levels of mental health were observed together with constant academic results. That is, mental health varied while attainment stayed the same. Academic buoyancy the ability of a learner to recover from the everyday obstacles, is actually another term for this protective effect (Martin & Marsh, 2009). In this connection, research on models including such mediators/modifiers (i.e., those that explain or influence relationships between variables) are natural progressions (Hayes, 2022).

Local features of the study setting may also contribute to the insulating effect. A school that has long been known at the provincial and national levels can be trusted to have well-established teaching practices, good counseling, committed homeroom teachers, and families that prioritize education. Such a supportive atmosphere will still produce high achievements in students who are dealing with major mental health issues, separating the link between the two aspects. This explanation is in line with dual-factor arguments that point out how wellbeing and mental health issues are two different sides of a continuous scale that in different combinations yield different outcomes at school, and how with proper care students showing symptoms can sustain performance levels that are the same as those of their non-ill classmates (Suldo & Shaffer, 2008; Xiao et al., 2021). In essence, if the protective model holds true, then finding a nonsignificant effect is a function of the environment as such: in another school with inadequate resources for intervention, the shield against stress would not work and an effect could show up.

Care should be taken when presenting the real-world implications, since they are quite easy to get wrong. The results do not in any way imply that the mental health of the students concerned is insignificant, or that the provision of school-based counselling services is unneeded. The result is just stating that in this environment, mental health was not able to foresee a student's academic performance. Thus, grade prediction is not a statement about the overall well-being of a student, though. One in three Indonesian teenagers experiencing symptoms of a mental disorders as per Nation-wide survey, coupled with the very low percentage of service usage found in the same survey are indicators of the fact that school-based psychological support is needed independently of any academic benefits (Wahdi et al., 2022; World Health Organization, 2022). This interpretation of the findings is supportive of the view that in such school settings the services of student

counselling should be justified, budgeted, and evaluated, based on students well-being itself. If the focus of the programmes is primarily on the effect they have on the academic performance of the students, then when these findings are made public that can really put the programmes in jeopardy.

Certain limitations should be considered when interpreting these results. Firstly, as the study is cross-sectional, it is not possible to draw causal or time-based implications from the data. In fact, there is strong evidence that mental health and academic success are reciprocally related over time. Therefore, longitudinal data would be required to accurately depict the relationship (Gómez-Baya et al., 2018). Secondly, the participants were from a single selective school and one year level which raises the question whether the results apply to other student groups or locations. Also, age and sex details of the students were not available and hence it was not possible to explore subgroups variations in the light of previous findings pointing to sex differences in adolescent mental health. Besides, the psychometric properties of the measuring tool had not been verified in this specific sample. Lastly, the design was limited to only two variables, so the mediating and moderating effects which have been outlined here have yet to be verified. Future studies in these contexts would benefit from longitudinal, multi-school methodologies with properly validated instruments which also cover full distributional statistics and reliability coefficients, motivate to study the effect of intervening variables such as social support and coping strategies and use measures for achievement more sensitive to short-term disruption. If designed so that they are capable of detecting small sizes effects, the studies, or they would be a different way of doing the testing, they might lead to a meaningful conclusion when the association is missing (Lakens et al., 2018).

Conclusions

This research paper looked into how the mental health of teens was connected to their school grades. It involved 132 students in the 12th grade from a high school in Jayapura City, Papua, that was a top producer for academic performance. They used the Pearson correlation product-moment technique as well. The correlation between these two variables turned out to be almost zero, and also, it could be said that it was not a statistically significant result: $r = .025$, $p = .778$. Thus, we also concluded that the hypothesis should not be accepted, at least in the case of the present study group. As far as this particular case is concerned, the teens' reports on their mental health did not predict the variation in their academic performance, as shown by report grades.

What gives this result its meaning is the line it draws as to a question. A relationship that is assumed to be very common is challenged in this finding which shows how it is possible that a given association may be true in one type of school situation but not in another. Not recognizing or detecting this relationship, i.e., its "absence", in a highly-selective, homogeneous, high-achieving setting is not surprising if one considers the following factors: restricted variance of the outcomes (a low range of values achieved in the test, e.g.), limited capability to detect small differences, the fact that a measure of trait level and not of situation specific is broad and, finally, the existence of protective institutional and motivational processes whose role is not being captured or modelled in one way or another. This confidence interval states clearly that this knowledge can be trusted: one could quite safely eliminate any medium or large association and keep a small association, so the paper reports the absence of detected association rather than the presence of no association.

Putting it into practice, this means that school counselling & psychosocial support in schools of this type should be built on the inherent value attached to adolescent well being rather than solely on the anticipated outcome of improved academic performance, and they should be assessed from the viewpoint of well-being at that. In the field of research, the way forward lies with the implementation of long-term, multi-school designs using validated instruments and clearly defined mediating & moderating pathways, which would show in which circumstances and via what processes adolescent mental health influences learning outcomes in the educational context of Papua.

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