



Positive mental health of female students and their integrity in conducting peer-assessment: A mixed method study

Salud mental positiva de las estudiantes y su integridad en la realización de la evaluación por pares: Un estudio de métodos mixtos

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Abstract

Introduction: In peer assessment practices, several academic integrity issues often occur in female physical education students.

Objective: This study aims to examine the relationship between positive mental health (PMH) and peer-assessment with integrity using a mixed-method study with an explanatory sequential design.

Methodology: Quantitative PMH data were collected from 31 female students using the nine-item Positive Mental Health Scale, and academic integrity data in conducting peer-assessment were collected using the 24-item Peer-Assessment Academic Integrity Scale. Qualitative data were collected from six respondents using six semi-structured interview guidelines to explore respondents' experiences using PMH to conduct peer-assessment with integrity.

Results: Spearman's test proved a positive and significant correlation between PMH and peer-assessment with integrity ($\rho = 0.634$; sig. < 0.001). In the thematic analysis, the PMH experience that helps female students carry out peer-assessment with integrity is: (1) stimulating motivation through constructive assessment, (2) managing emotions from various subjective pressures, (3) believing in one's ability to remain objective at all times, and (4) rejecting compromise with various academic deviations.

Discussion: These results provide an important note that lecturers need to pay attention to the mental health of their female students before allowing them to participate in peer assessment in order to avoid various assessment practices that are not conducted with integrity.

Conclusions: Strengthening positive mental health can be an important strategy in improving academic integrity, especially in peer assessment.

Keywords

Academic integrity; female students mental health; peer-assessment; positive mental health.

Resumen

Introducción: En la práctica de la evaluación entre pares, se presentan con frecuencia diversos problemas relacionados con la integridad académica en estudiantes mujeres de la carrera de educación física.

Objetivo: El presente estudio tiene como propósito examinar la relación entre la salud mental positiva (Positive Mental Health, PMH) y la realización de evaluaciones entre pares con integridad, mediante un enfoque de métodos mixtos con un diseño secuencial explicativo.

Metodología: Los datos cuantitativos sobre PMH se recolectaron de 31 estudiantes mujeres utilizando la Positive Mental Health Scale de nueve ítems, mientras que los datos sobre integridad académica en la evaluación entre pares se obtuvieron mediante la Peer-Assessment Academic Integrity Scale de 24 ítems. Los datos cualitativos se recogieron de seis participantes a través de entrevistas semiestructuradas basadas en seis guías temáticas, con el fin de explorar las experiencias de las estudiantes al utilizar la PMH para realizar evaluaciones entre pares con integridad.

Resultados: La prueba de correlación de Spearman evidenció una relación positiva y significativa entre la PMH y la integridad en la evaluación entre pares ($\rho = 0.634$; sig. < 0.001). El análisis temático reveló que las experiencias relacionadas con la PMH que favorecen la integridad en la evaluación incluyen: (1) estimular la motivación mediante evaluaciones constructivas, (2) gestionar emociones ante diversas presiones subjetivas, (3) confiar en la capacidad personal para mantener la objetividad en todo momento, y (4) rechazar compromisos con desviaciones académicas.

Discusión: Estos resultados subrayan la importancia de que los docentes consideren el estado de salud mental de sus estudiantes mujeres antes de permitirles participar en procesos de evaluación entre pares, a fin de evitar prácticas evaluativas que carezcan de integridad.

Conclusiones: El fortalecimiento de la salud mental positiva puede constituir una estrategia fundamental para mejorar la integridad académica, especialmente en el contexto de la evaluación entre pares.

Palabras clave

Integridad académica; salud mental de las estudiantes; evaluación entre pares; salud mental positiva.



Introduction

Peer-assessment has been widely recognized in learning as a source of valuable and transformative feedback on professionalism because it is specific and explains areas that need improvement (Nofziger et al., 2010). Learning becomes more equitable, practical, and satisfying when students are willing to make improvements based on constructive and rational input (Van Hoe et al., 2024; Xiao & Lucking, 2008) so that it is proven to improve learning for both observers and those observed (Backman et al., 2024). Undergraduate education students will constantly assess their students' work in their future professional environment (school), so peer-assessment accustoms them to being analytical and critical individuals and helps them to qualify the work of their peers. Supporting the acquisition of critical skills makes students more independent and have integrity, not only for their work but also for the work of their peers (Blegur, Subarjah, et al., 2024; Morris, 2018; Pérez et al., 2022), which has a positive impact when they assess their students' work when they become teachers.

Behind the significance of peer-assessment in supporting the productivity of student' formative assessment performance in the classroom, we would like to highlight some academic integrity issues that often occur when practicing peer-assessment. We start from Aryadoust (2016) study on 66 students who found that when students evaluated oral presentations by peers of the opposite sex, they tended to overestimate their assessment scores. They also consistently underestimated the scores of their peers from the same major. Furthermore, although there was little evidence of peer-assessment gender bias, both men and women rated female teammates higher than male teammates (Espey, 2022). Aryadoust (2016) previous findings were also reinforced in exploratory study Vakkou et al. (2023). Both studies demonstrated that students preferred expert feedback over peer-assessment because the justification of the assessment results was more straightforward to confirm. The reason is that implementing peer-assessment is less objective or overestimates the assessment scores in almost every indicator.

Gender bias often occurs when conducting peer-assessment (Ostafichuk & Sibley, 2019). One of the facts is reflected in the peer-assessment score, which cannot fully represent students' achievements (Stonewall et al., 2024). Other interesting data in the study of Ocampo et al. (2023) on Team-Based Learning Peer Assessment found (although there was no statistical difference) that untrained male assessors and those who lack confidence in their abilities will feel uncomfortable when their colleagues (females) assess their performance. The study of Townsend and Bishop Baier (2020) also presented that teams with a majority of women produced higher peer-assessments than teams with a majority of men. It means that female students are more stable when conducting peer-assessment than male students. One of the reasons why women are superior in conducting peer-assessment is because they have a sound scientific attitude. Female students have an intense curiosity about facts or data, the ability to criticize and reveal innovation, collaborate and think openly, and a more careful and thorough character in exploring something (Wigati et al., 2023).

Although female students are more favored in peer-assessment, a cross-sectional study by Mokhtari et al. (2013) on 1632 female students in Iran proved that 48.5% had mental problems. A rapid review study by Eaton et al. (2023) also reported increased student anxiety and stress during the pandemic, especially for matters related to academic integrity. For example, when students receive pressure, an increase in mental health problems is more likely to occur (Stentiford et al., 2023), thus affecting their academic performance. Much earlier, Pope (2005) reported that female students' stress responses were more vigorous when conducting self-assessment and peer-assessment. Unfortunately, the continuation of this study report was not found in current studies. In fact, with the widespread practice of peer-assessment, various contributing factors should also be analyzed in maintaining academic integrity so that lecturers can anticipate various potential biases from the results of peer-assessment conducted by female students. If this bias cannot be minimized, peer-assessment will find it challenging to produce a formative evaluation framework that supports improving the quality of learning and developing student potential because it refers to assessment results far from academic practices with integrity.

The success of peer-assessment is generally influenced by the attitude, motivation and bias of student relationships (Rahmatillah & Fajrita, 2022), positive attitudes in peer-assessment (Shui Ng & Yu, 2023), the creation of interpersonal relationships (Daou et al., 2020) and the ability to control authority and emotions (Blegur, Subarjah, et al., 2024). These facts explain that relationships, positive attitudes, authority, and interpersonal relationships also influence the success of peer-assessment with integrity.



Until now, there has been no potent, specific, and comprehensive report evidence discussing the relationship between female students' mental health and their success in maintaining their academic integrity when conducting peer-assessment. Researchers only report the contribution of mental health to students' academic performance (Chu et al., 2023; Jabbarov et al., 2024; Zhang et al., 2024). Therefore, investigating the relationship between positive mental health and the integrity of female students conducting peer-assessment is still very relevant. Is the success of female students conducting peer-assessment with integrity also influenced by their enjoyable, confident, and stable physical and emotional living level, and how does that happen? Alternatively, is there even no correlation at all? Thus, the results of this study will provide a new landscape to consider the mental health factors of adolescent girls before providing peer-assessment and how they organize the PMH to ensure its integrity when conducting peer-assessment.

Method

This study adopted a mixed-method research with an explanatory sequential design. The researcher first conducted quantitative research, analyzed the results, and then developed the results to explain them in more detail through qualitative research (Creswell & Creswell, 2018) by referring to the protocol recommended by Ivankova et al. (2006). The details are as follows: (1) quantitative data collection, (2) quantitative data analysis, (3) connecting quantitative and qualitative phases, (4) qualitative data collection, (5) qualitative data analysis, and (6) integration of the quantitative and qualitative results.

Quantitative data collection

First, the researcher collected quantitative data on the variables of positive mental health (PMH) and academic integrity when conducting a peer-assessment of 31 second-semester female students ($M \pm SD$ age = 19.1 ± 1.2) of the Physical Education, Health, and Recreation Study Program, Faculty of Teacher Training and Education, Universitas Kristen Artha Wacana which was determined using simple random sampling. PMH data collection used the Positive Mental Health Scale (PMH-scale) developed by Lukat et al. (2016). The scale is unidimensional and has gone through a series of tests using samples from the student population ($n = 5406$); the PMH-Scale has an internally consistent value (α) of 0.93 and a loading factor (λ) between 0.64-0.84. The PMH-scale includes nine items, including "I am often carefree and in good spirits" (item 1), "I enjoy my life" (item 2), "All in all, I am satisfied with my life" (item 3), "In general, I am confident" (item 4), "I manage well to fulfil my needs" (item 5), "I am in good physical and emotional condition" (item 6), "I feel that I am well equipped to deal with life and its difficulties." (item 7), "Much of what I do brings me joy" (item 8), and "I am a calm, balanced human being" (item 9). Respondents responded to the questionnaire on a 4-point Likert scale, namely, strongly disagree-strongly agree.

Academic integrity variable data in peer-assessment were collected using the Peer-Assessment Academic Integrity Scale (PAAIS-24) developed by Blegur, Subarjah, et al. (2024). This scale (PAAIS-24) has been tested on 540 respondents ($M \pm SD = 20.8 \pm 1.95$) with Aiken validity values >0.80 , discriminant index value >0.50 , EFA and CFA loading factor values >0.50 , and Cronbach's alpha value is 0.95. The construction of the PAAIS-24 refers to the fundamental values of academic integrity from the International Centre for Academic Integrity (2021), namely honesty, items 1-4, including: "I carry out peer-assessments honestly because lecturers always appreciate my every achievement". Trust indicators, item 5-8, including: "Students who think critically can be trusted to carry out peer-assessments". Fairness indicators, item 9-12, including: "I use the instrument to assess the academic performance of colleagues objectively". Respect indicators, item 13-16, including: "I improved my academic performance after getting peer-reviewed results". Responsibility indicators, item 17-20, including: "I am responsible for studying the assessment instrument prior to conducting a peer-assessment". Courage indicators, item 21-24, including: "I consistently defend the results of peer-assessments that are considered correct, even though I have the chance to get rejection by colleagues". Respondents answered the PAAIS-24 using a 5-point Likert scale (strongly disagree-strongly agree).

Quantitative data analysis

The data collection results of PMH variables and academic integrity during peer-assessment were analyzed descriptively and correlational to test the relationship between female students' mental health variables and their integrity in peer-assessment of their peers' performance. The results of the Shapiro-Wilk normality test showed that the significance value of the PMH variable data was <0.001 (<0.05), and the academic integrity variable was 0.200 (>0.05). It means that one of the groups of research variable data is not normally distributed, so the test uses Spearman's. If the significance value is <0.05 , there is a significant correlation between PMH and female students' integrity during peer-assessment, and vice versa. Correlation coefficient assessment uses the following categories: (1) 0.00-0.10 (negligible), (2) 0.10-0.39 (weak), (3) 0.40-0.69 (moderate), (4) 0.70-0.89 (strong), and (5) 0.90-1.00 (very strong) (Dancey & Reidy, 2020; Schober et al., 2018). The entire process of collecting and analyzing quantitative data uses the assistance of Google Form applications, Microsoft Excel, and SPSS version 29.

Connecting quantitative and qualitative phases

Referring to Spearman's correlation analysis results, the researcher then explored the more contextual and clinical meaning of respondents who successfully maximized PMH when conducting peer-assessment with integrity. The researcher used a purposive sampling technique to determine six potential respondents by considering their high response to PMH data and academic integrity during the previous quantitative study analysis. The six respondents will likely provide practical experience using PMH to support peer-assessment implementation with integrity while carrying out academic tasks in class. The six respondents in question are R1 (female/19 years old), R2 (female/19 years old), R3 (female/19 years old), R4 (female/19 years old), R5 (female/18 years old), R6 (female/20 years old). Still, at this stage, the researcher also began to determine the semi-structured interview technique as a qualitative data collection to explore the clinical meaning of how respondents reported the relationship between the two research variables. In addition, the researcher also used the respondent triangulation process to ensure the credibility of the thematic conclusion drawing.

Qualitative data collection

At this stage, the researcher asked several questions to the respondents and the answers were tested using respondent triangulation through the variation of answers among respondents to develop a thematic conclusion about the experience of female students using PMH when conducting peer-assessment with integrity. Not to forget, the researcher first submitted informant concerns to the respondents so that they would be involved consciously and entirely responsible for all information provided and guarantee the rights of respondents from all forms of losses that arise.

The questions that sparked the discussion were as follows. First, "In your opinion, why does mental health greatly support your academic integrity when assessing the work/tasks/performance of peers?" Second, "Give an example of how you use positive mental health when assessing the work/tasks/performance of peers with integrity?" Third, "In your opinion, does mental health affect the results of peer-assessments with integrity?" Fourth, "When you are confident, does it help you to assess your peers' work more honestly and responsibly?" Fifth, "When you are in good physical and emotional condition (without pressure), do you dare to refuse compromise with colleagues to commit academic violations?" Sixth, "When your mental health is bad, can you conduct peer-assessment honestly, fairly, and responsibly?"

Qualitative data analysis

The qualitative data analysis stage, marked by interview data that researchers have transcribed, is analyzed thematically. The thematic analysis process is as follows: preparing and organizing the data for analysis, transcribing the data, becoming familiar with the data, memoing the data, coding the data, and moving from codes to categories and categories to themes (Lester et al., 2020).

Integration of the quantitative and qualitative results

Lastly, from the explanatory sequential design integration phase of the quantitative and qualitative results, the researcher interprets and explains the two study results to complement each other. Based on this research design, qualitative data analysis results explain more deeply how PMH positively and significantly correlates with the peer-assessment behavior of female students with integrity. It can include



forming a new theme that explains the factors that support the correlation between the two research variables.

Results

Quantitative results

Description Analysis

The unidimensional PMH data explains that respondents have a good mental health profile. More specifically, they gave high responses to two items, namely “I am often carefree and in good spirits” ($M \pm SD = 3.9 \pm 0.3$) and the item “I enjoy my life” ($M \pm SD = 3.9 \pm 0.4$). It means that early semester female students have feelings of joy and enthusiasm for participating in learning. They can also still enjoy life as new students. Perhaps the transition phase from high school to college is still filled with various positive spirits about lecture activities, the learning environment, and student relationships. They gain new experiences and relationships that help shape a healthy mental attitude about learning life at university.

On the other hand, respondents gave low responses to the item “I manage well to fulfil my needs” ($M \pm SD = 3.3 \pm 0.7$) (see Table 1). This result can be interpreted as the college period also beginning to form new needs for female students. It begins to teach them to manage time, manage emotions, manage physical, and also manage finances well so that academic needs, relationship needs, sports performance needs, and fashion needs must all run proportionally and support each other's academic success. At this phase, time management needs to be trained, and students also need to start to formulate priority decisions so that their mental health remains stable in the transition phase.

Table 1. Description of respondents' positive mental health

No	Statement	Strongly disagree	Disagree	Agree	Strongly agree	M $\pm$ SD
		f(%)	f(%)	f(%)	f(%)	
1	I am often carefree and in good spirits	0(0%)	0(0%)	4(12.9%)	27(81.1%)	3.9 $\pm$ 0.3
2	I enjoy my life	0(0%)	1(3.2%)	1(3.2%)	29(93.5%)	3.9 $\pm$ 0.4
3	All in all, I am satisfied with my life	0(0%)	3(9.7%)	4(12.9%)	24(77.4%)	3.7 $\pm$ 0.7
4	In general, I am confident	1(3.2%)	3(9.7%)	5(16.1%)	22(71.0%)	3.5 $\pm$ 0.8
5	I manage well to fulfil my needs	0(0%)	5(16.1%)	12(38.7%)	14(45.2%)	3.3 $\pm$ 0.7
6	I am in good physical and emotional condition	0(0%)	3(9.7%)	7(22.6%)	21(67.7%)	3.6 $\pm$ 0.7
7	I feel that I am actually well equipped to deal with life and its ...	0(0%)	4(12.9%)	7(22.6%)	20(64.5%)	3.5 $\pm$ 0.7
8	Much of what I do brings me joy	1(3.2%)	4(12.9%)	3(9.7%)	23(74.2%)	3.5 $\pm$ 0.9
9	I am a calm, balanced human being	0(0%)	4(12.9%)	7(22.6%)	20(64.5%)	3.5 $\pm$ 0.7

Unlike the unidimensional PMH data, academic integrity data in peer-assessment is multidimensional, from honesty to courage. The results of the student academic integrity data profile show positive results, as in the PMH data. This result is because of the five Likert scales: The average respondent gave support at scale level three (out of four), more specifically in the range of values 3.8 to 4.3 (see Table 2).

The highest response mean was distributed on the item “Lecturers who behave fairly when assessing my academic performance inspire me to be honest when conducting peer-assessments” ($M \pm SD = 4.3 \pm 0.6$). “I carry out peer-assessments honestly because lecturers always appreciate my every achievement” ($M \pm SD = 4.3 \pm 0.6$). Item “Students who tend to be honest are more responsible for peer-assessments” ($M \pm SD = 4.3 \pm 0.7$). These three items are in the “Honesty” dimension or indicator. Meanwhile, one item in the “Fairness” dimension or indicator is the item “Group discussions became an opportunity for me to clarify the results of peer-assessments of my academic performance” ($M \pm SD = 4.3 \pm 0.7$). On the other hand, the item that received the lowest average response was “Colleagues trust me to assess because it can provide objective information” ($M \pm SD = 3.8 \pm 0.9$), which shows that the objectivity of female students when conducting peer-assessments also still needs to be a shared concern. Therefore, the determination of colleagues when conducting assessments to obtain objective and constructive results must be considered and developed by lecturers to grow academic integrity among female students.

Table 2. Description of respondents' academic integrity during the implementation of peer-assessment

No	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	M±SD
		f(%)	f(%)	f(%)	f(%)	f(%)	
1	The lecturer's trust in me to assess the academic ...	0(0%)	0(0%)	6(19.4%)	17(54.8%)	8(25.8%)	4.1±0.7
2	Lecturers who behave fairly when assessing my ...	0(0%)	0(0%)	3(9.7%)	16(51.6%)	12(38.7%)	4.3±0.6
3	I carry out peer assessments honestly because ...	0(0%)	0(0%)	2(6.5%)	18(58.1%)	11(35.5%)	4.3±0.6
4	Students who tend to be honest are more ...	0(0%)	0(0%)	4(12.9%)	15(48.4%)	12(38.7%)	4.3±0.7
5	Colleagues trust me to assess because it can provide ...	0(0%)	1(3.2%)	11(35.5%)	11(35.5%)	8(25.8%)	3.8±0.9
6	Peer assessments conducted using objective ...	0(0%)	1(3.2%)	9(29.0%)	11(35.5%)	10(32.3%)	4.0±0.9
7	Peer-assessment using the instrument has more ...	0(0%)	0(0%)	8(25.8%)	12(38.7%)	11(35.5%)	4.1±0.8
8	Students who think critically can be trusted to carry ...	0(0%)	0(0%)	7(22.6%)	12(38.7%)	12(38.7%)	4.2±0.8
9	Peer appraisal trains me to behave fairly during ...	0(0%)	0(0%)	4(12.9%)	16(51.6%)	11(35.5%)	4.2±0.7
10	I can be fair in carrying out peer assessments	0(0%)	0(0%)	6(19.4%)	14(45.2%)	11(35.5%)	4.2±0.7
11	I use the instrument to assess the academic ...	0(0%)	0(0%)	7(22.6%)	16(51.6%)	8(25.8%)	4.0±0.7
12	Group discussions became an opportunity for me to ...	0(0%)	0(0%)	5(16.1%)	13(41.9%)	13(41.9%)	4.3±0.7
13	I avoid cheating when conducting peer appraisals ...	0(0%)	1(3.2%)	5(16.1%)	15(48.4%)	10(32.3%)	4.1±0.8
14	I improved my academic performance after getting ...	0(0%)	0(0%)	5(16.1%)	16(51.6%)	10(32.3%)	4.2±0.7
15	I respect the results of peer-assessment of my ...	0(0%)	2(6.5%)	4(12.9%)	14(45.2%)	11(35.5%)	4.1±0.9
16	I discuss with lecturers and colleagues if there are ...	0(0%)	0(0%)	5(16.1%)	16(51.6%)	10(32.3%)	4.2±0.7
17	I am willing to accept the consequences of the ...	0(0%)	1(3.2%)	4(12.9%)	16(51.6%)	10(32.3%)	4.1±0.8
18	I am responsible for studying the assessment ...	0(0%)	0(0%)	6(19.4%)	17(54.8%)	8(25.8%)	4.1±0.7
19	I am responsible for supporting colleagues to ...	0(0%)	0(0%)	3(9.7%)	19(61.3%)	9(29.0%)	4.2±0.6
20	I am responsible for providing correct information ...	0(0%)	1(3.2%)	5(16.1%)	15(48.4%)	10(32.3%)	4.1±0.8
21	I consistently defend the results of peer assessments ...	0(0%)	1(3.2%)	6(19.4%)	14(45.2%)	10(32.3%)	4.1±0.8
22	I firmly refuse to increase my friend's score when ...	0(0%)	1(3.2%)	8(25.8%)	11(35.5%)	11(35.5%)	4.0±0.9
23	I dare convey the results of a colleague's ...	0(0%)	1(3.2%)	5(16.1%)	16(51.6%)	9(29.0%)	4.1±0.8
24	I am committed to supporting objective peer-review ...	0(0%)	0(0%)	4(12.9%)	16(51.6%)	11(35.5%)	4.2±0.7

Although the results are positive, we highlight several statement items that received low respondent responses. For example, 3.2% of respondents still responded “*Disagree*” to the statement item “*I firmly refuse to increase my friend's score when carrying out peer-assessments so that he is careful in identifying problems with his academic performance*”—underlining that female students also easily compromise to boost their peers' scores (although not dominantly). This attitude shows they do not dare to prioritize improving their peers' performance over maintaining social relations. Whereas when female students dare to convey objective assessments, it helps their peers to more carefully identify problems with their academic performance and find alternative solutions. Furthermore, 6.5% of respondents also responded “*Disagree*” to the statement item “*I respect the results of peer-assessment of my academic performance, even if it does not meet expectations*”. It means that female students do not show enough appreciation for performance results that do not match their expectations. It can continuously ignite them in a disharmonious relationship in a learning community. In fact, the results of peer-assessments ideally need to be clarified and followed up to improve academic performance in the future.

Spearman's Analysis

Continuing with the results of the Spearman's total correlation test, it proves a positive and significant relationship between PMH and integrity in peer-assessment with a correlation value of 0.634 (sig. <0.001). It indicates that the correlation between the two variables is classified as moderate (0.40-0.69) (Dancey & Reidy, 2020; Schober et al., 2018). The intercorrelation test results further reveal that the highest correlation was found between the PMH item “I feel that I am actually well equipped to deal with life and its difficulties” with the indicator “Respect” ($\rho = 0.737$) (see Table 3). It suggests that respondents can actualize their mental health by demonstrating the attitude and ability to cope with various life challenges by avoiding cheating when conducting peer-assessments because they respect the values they uphold, trying to improve academic achievement after observing the results of peer-assessments even though the results do not meet expectations and prioritizing dialogue and discussion with lecturers and colleagues if there are differences of opinion in the assessment.

Only two indicators of academic integrity obtained significant correlation values from the nine PMH: “Honesty” and “Respect”. When female students have high PMH, they are also more honest and respectful when giving peer-assessments with integrity. Meanwhile, PMH items that are not significantly correlated are found between “I enjoy my life” with the “Trust” indicator ($\rho = 0.324$), the “Fairness” indicator ($\rho = 0.350$), and the “Courage” indicator ($\rho = 0.320$). PMH item “All in all, I am satisfied with my life” with the “Trust” indicator ($\rho = 0.328$). PMH item “I am in good physical and emotional condition” with the “Fairness” indicator ($\rho = 0.306$), the “Responsibility” indicator ($\rho = 0.269$), and the “Courage” indicator ($\rho = 0.344$). Finally, the PMH item “Much of what I do brings me joy” with the indicators “Trust” (ρ



= 0.258), “Fairness” indicator ($\rho = 0.309$), and “Responsibility” indicator ($\rho = 0.344$). Thus, lecturers need to pay serious attention to the four PMH behaviors of female students when they conduct peer-assessments so that they can use their autonomy appropriately to support academic integrity and learning quality.

Table 3. Intercorrelation between positive mental health and integrity during peer-assessment

No	Positive mental health	Academic integrity						
		Honesty	Trust	Fairness	Respect	Responsibility	Courage	Total
1	I am often carefree and in ...	0.573**	0.544**	0.517**	0.580*	0.580**	0.543**	0.562**
2	I enjoy my life	0.423**	0.324	0.350	0.410*	0.375*	0.320	0.359*
3	All in all, I am satisfied with ...	0.525**	0.328	0.413*	0.486**	0.468**	0.517**	0.472**
4	In general, I am confident	0.551**	0.392*	0.489**	0.651**	0.588**	0.609**	0.541**
5	I manage well to fulfil my needs	0.512**	0.369*	0.401*	0.542**	0.468**	0.557**	0.493**
6	I am in good physical and ...	0.426*	0.373*	0.306	0.428*	0.269	0.344	0.387*
7	I feel that I am actually well ...	0.693**	0.691**	0.726**	0.737**	0.709**	0.722**	0.768**
8	Much of what I do brings me ...	0.508**	0.258	0.309	0.386*	0.334	0.422*	0.380*
9	I am a calm, balanced	0.551**	0.473**	0.559**	0.661**	0.540**	0.591**	0.590**
10	Total	0.641**	0.491**	0.576**	0.692**	0.584**	0.657**	0.634**

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Qualitative results

Stimulating Motivation through Constructive Assessment

Positive mental health is vital to support students in carrying out peer-assessment with integrity. A positive mentality ensures students have good social-emotional conditions to assess their peers' performance. They are motivated to carefully identify various obstacles to their peers to provide targeted improvement solutions. Furthermore, PMH helps students think objectively and free from excessive pressure. Students make fair decisions, consider the results of their peers' work carefully, and are not contaminated to take shortcuts such as biased assessments, plagiarism, data falsification, data publication, or other integrity violations as listed in the following reference code:

“Because good mental health influences a person's socio-emotional condition and significantly impacts motivation.” (R1/Female/19 years old).

“When an individual has stable mental health, they are better able to make fair decisions, carefully evaluate their peers' work, and resist the temptation to take shortcuts such as plagiarism or biased assessments.” (R2/Female/19 years old).

“Good mental health helps maintain focus, objectivity, and fairness in assessment. It prevents emotional bias and ensures that decisions are made based on proper academic standards.” (R6/Female/20 years old).

Good mental health supports academic integrity when assessing assignments or peer performance. A stable mental state helps students to remain objective and honest when providing assessments and feedback. When students' mental health is problematic, for example, when experiencing stress and anxiety, students cannot focus on the assessment content. Instead, they are easily influenced by emotions, so they can provide inaccurate assessments and do not assess objectively because they have personal problems with their friends even though their work is good. Another example is someone with unstable mental health and a high sense of perfectionism. Because they set too high standards for themselves, they also set those standards for others. With their critical assessment, they feel that their friend's performance is lacking even though their friend's performance is sufficient according to general standards and assessment instruments.

Managing Emotions from Various Subjective Pressures

Each student has clinical experience using positive mental health when conducting peer-assessments of work/tasks/performance with integrity. Some students express their mental health by avoiding conflict due to differences of opinion and taking more progressive steps to complete the tasks entrusted to the maximum. Other students take a stance to manage stress and pressure when faced with many work

assignments. In this situation, if students manage their mentality incorrectly, they will become more panicked and faced with three dilemmas, namely: (1) completing the task as is, (2) committing an integrity violation, and even (3) ignoring or being negligent in doing it. For this reason, focusing on quality is very important, not the other way around, rushing to complete the assessment quickly without careful consideration. More details can be seen in the following reference code:

"For example, having a poor relationship or being in conflict with someone but still needing to assess them objectively. Additionally, when I have good mental health, I strive to be the best and complete my tasks to the fullest." (R1/Female/19 years old).

"Managing stress and pressure—when facing deadlines or a heavy workload, good mental health helps me stay calm and avoid rushing the assessment process. I can focus on quality rather than hastily completing the evaluation without careful consideration." (R2/Female/19 years old).

"Yes, mental health has an impact because a stable mental condition enables a person to think clearly, act fairly, and remain unaffected by emotional factors that could compromise the integrity of the assessment." (R6/Female/20 years old).

Other students have different ways of maintaining their mental health. For instance, R3 (Female, 19 years old) practices positive mental health by ensuring that she is focused and calm before conducting an assessment. If she feels tired, anxious, or overwhelmed, she engages in light activities first to refresh her mind. For example, when evaluating a peer's performance in a group setting, she considers not only the final outcome but also each member's effort and contribution. She appreciates those who work hard and provides clear feedback to those who may not perform optimally without being overly critical. She also ensures that personal feelings of frustration toward any group member do not influence her assessment. With good mental health, she can think more clearly and provide fair and constructive evaluations that benefit her peers.

Believing in One's Ability to Remain Objective at All Times

Good self-confidence is one of the attitudinal dimensions representing female students' positive mental health. Therefore, the researcher also conducted a qualitative exploration to examine its correlation with students' honesty and responsibility in conducting peer-assessments. With confidence, students can better recognize positive aspects and remain objective rather than subjective. When students feel confident, they are more likely to assess their peers' work honestly. Confidence enables students to make decisions with certainty and provide objective evaluations without hesitation or fear of offending others, as their focus remains on the quality of their peers' work based on established criteria, free from external pressure or personal feelings.

"Being objective includes treating all individuals fairly to prevent bias. Emotional regulation is also essential to separate personal matters from professional tasks. Additionally, conducting assessments in a pressure-free environment allows for critical evaluation. Lastly, it is important to provide appreciation and offer constructive feedback." (R4/Female/19 years old).

"Engaging in positive interactions and exchanging constructive feedback and criticism to ensure the effectiveness of the assessment process." (R5/Female/18 years old).

"When evaluating a peer's work, I remain objective despite having a personal relationship with them. I provide constructive criticism without being influenced by personal emotions." (R6/Female/20 years old).

Confidence also develops into an attitude that enables students to build positive relationships, even when their assessment results and feedback differ from their peers' expectations. Thus, confidence is about assessing peer performance and trusting that interpersonal relationships will be maintained, provided that the evaluation remains objective and constructive. Furthermore, R3 (Female, 19 years old) shared her experience regarding confidence. She recalled a situation where a peer gave a presentation, and the lecturer asked her to provide feedback. She could confidently deliver constructive criticism without hesitation, fear of hurting others, or fear of making mistakes. She could identify which aspects were well-executed and which needed improvement, offering concrete suggestions. She added that if she lacked confidence, she would feel uncertain when giving criticism, be overly cautious, or even limit her feedback to general comments, which would not effectively help her peers improve.



Rejecting Compromise with Various Academic Deviations

When conducting peer-assessment, students are given high authority to measure, assess, and evaluate the performance of their peers. Therefore, students must be in good and positive physical and emotional condition to be calmer and more analytical when distinguishing good performance that needs to be maintained and lousy performance that needs to be improved. With good conditions, students can assess the situation objectively, consider the long-term consequences of the action, and continue to prioritize the pillars of integrity, such as honesty and fairness, in every decision. Not only that, stable physical and emotional health also gives students the courage to express disagreement or report inappropriate actions because they feel more confident in being accountable for their actions, as in the following reference code.

“Maintaining physical and emotional balance is essential to ensuring that I remain integrous and responsible in every academic endeavor.” (R2/Female/19 years old).

“Yes, when I am in a good physical and emotional state, I am more confident in refusing to compromise on academic misconduct. I am able to make decisions with integrity without being easily influenced by social pressure or a sense of discomfort toward friends.” (R3/Female/19 years old).

“When I am in a good emotional state, free from internal pressure (such as reluctance or discomfort) and external pressure (such as peers’ perceptions when I refuse), I may reject the compromise, albeit indirectly.” (R4/Female/19 years old).

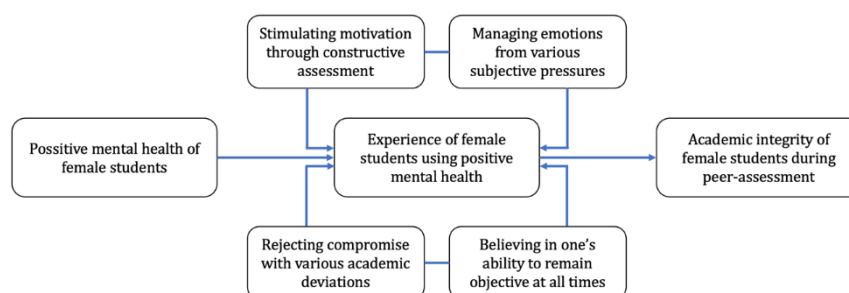
“Yes, good physical and emotional condition enables a person to be more assertive in rejecting academic compromise, as they possess strong mental resilience and a clear understanding of academic ethics.” (R6/Female/20 years).

When students are in good physical and emotional condition, they feel more courageous and assertive in refusing to compromise with colleagues regarding academic violations. They tend to be more aware of the values of academic integrity. Thinking clearly and not being affected by pressure or temptation to break the rules, even though there may be external influences or encouragement to follow “shortcuts”. For example, if their friends ask them to copy an assignment, they will be more assertive in refusing. With stable physical and emotional conditions, they can explain to their colleagues that this action is an academic violation that can harm them and their friends. Students look for other ways, namely by collaborating and helping their friends to do their assignments without having to copy the answers to assignments that students have done before.

Integration of the quantitative and qualitative results

As shown in Table 3, the quantitative study provides statistical evidence that PMH is positively and significantly correlated with female students’ academic integrity during peer-assessment. Behind the significant correlation, we also found four main themes that can explain female students’ experiences of using PMH well so that they can maintain their integrity during peer-assessment.

Figure 1. A model of female students’ experiences in utilizing PMH to maintain academic integrity during peer-assessment



The themes are (1) stimulating motivation through constructive assessment, (2) managing emotions from various subjective pressures, (3) believing in one’s ability to remain objective at all times, and (4)

rejecting compromise with various academic deviations (see Figure 1). Thus, the integrity of female students in implementing peer-assessment increases when students improve their PMH. Conversely, integrity in peer-assessment decreases if they have problems managing their PMH.

Discussion

Correlation between PMH and female students' academic integrity during peer-assessment

This study successfully provides a new landscape that PMH is positively and significantly correlated with the academic integrity of female students in conducting peer-assessment with a Spearman's correlation value of 0.634. The findings of this study successfully expand previous studies that only discussed the contribution of mental health to students' academic performance (Chu et al., 2023; Jabbarov et al., 2024; Zhang et al., 2024) and other studies that focused on the influence of academic integrity on mental health (Eaton et al., 2023; Eaton & Turner, 2020; Khalil et al., 2024). It means that integrity is not the only thing correlated with mental health. On the contrary, with various academic integrity problems among students, PMH is also effective in overcoming students' academic integrity problems when conducting peer-assessments. Thus, lecturers must ensure that their female students have a positive mental health condition. When conducting peer-assessment they can use their autonomy and authority with integrity in positive and constructive ways to support the development of their colleagues' potential and quality.

The shift in student-centered learning orientation has been extended by providing learning experiences not limited to searching, planning, and developing learning materials. Students have been involved and accustomed to assessing their own and their peers' performance development. Peer-assessment provides a valuable mechanism for developing many positive qualities in students (Langan et al., 2005) that not only reduce the workload of lecturers but significantly benefit student engagement and learning (Sousa et al., 2024) through interaction and collaboration in groups (Adesina et al., 2023), as well as credible, effective, and valuable formative evaluation for students (Aryadoust, 2016; Double et al., 2020; Mumpuni et al., 2022; Pérez et al., 2022; Topping, 2009). Behind the availability of valuable experience (peer-assessment), students are often trapped in academic integrity issues. Therefore, more than 65% of participants agreed on subjective challenges in peer-assessment practices (Munni, 2021) so that they do not make objective assessments or exaggerate assessment scores (Aryadoust, 2016) and do not respect the performance of their peers (Espey, 2022). Not only that, most lecturers also doubt their students' objectivity in conducting self and peer-assessment (Gurbanov, 2016). If this academic integrity problem is not resolved, then the practice of peer-assessment will not provide significant results in developing students' potential. At the same time, students will abuse their authority when they work in a professional environment later (Brown et al., 2020).

Addressing the problem of academic integrity in peer-assessment, promoting PMH has become one of the alternatives that encourage iterative and incremental processes in supporting the creation of students' academic integrity experiences when conducting peer-assessment. Just look at the test results reporting that PMH correlates significantly with all indicators of academic integrity. The highest PMH correlation score was found in the "Respect" indicator (0.692), followed by the "Courage" indicator (0.657). Good mental health will help students develop feelings, thoughts, and actions that increase their ability to overcome challenges and enjoy life. They also more positively appreciate equality, social justice, interconnection, and self-esteem (Norwich et al., 2022). Armed with positive mental health, students have lower psychological vulnerability (Teixeira et al., 2022), so they can photograph the peer-assessment experience to improve their abilities so that every challenge to assess with integrity is a way for them to enjoy their learning experience. They also appreciate differences in learning performance by avoiding cheating when conducting peer-assessment because they respect universal values, respecting peer-assessment results, even if they are not as expected, and innovating efforts to improve academic performance after receiving peer-assessment results, for example, by discussing with lecturers and other students instead of seeking justification and inciting social conflict.



Academic integrity cases have been prominent because students do not dare to reveal deviations and/or deliberately tolerate academic cheating (Saana et al., 2016) to get social acceptance/likes and also gratitude to their friends (Blegur et al., 2017; Diego, 2017), low self-esteem/self-confidence and lack of respect for academic rules (Jalilzadeh et al., 2024). This study has answered this problem: PMH is vital for a healthy and satisfying life (Divecha & Acharya, 2024). Positive mental health helps students improve their mental well-being, learning skills, self-esteem, self-perception, and attitudes towards social support; increases literacy and awareness of mental health and helps them overcome personal and academic challenges (Hyseni Duraku et al., 2023; Teixeira et al., 2022). If we examine further the intercorrelation results in Table 3, the PMH item "I feel that I am actually well equipped to deal with life and its difficulties" correlates most significantly with all indicators of academic integrity. Based on the self-evaluation model, female students can face various challenges while maintaining integrity. They can act honestly with various academic deviations without being held hostage by pragmatic interests. Students believe in their ability to solve problems, are fair in assessing and evaluating themselves and others, respect every difference and achievement, are responsible for upholding integrity, and also dare to reject various compromises of academic deviation (Fishman, 2014; International Centre for Academic Integrity, 2021).

Female students' experiences using PMH to maintain academic integrity when conducting peer-assessment

Four new experiences of female students using PMH to ensure their academic integrity during peer-assessment begin with stimulating motivation through constructive assessment. Constructive assessment is not just assessing the final result; students provide information and data to their peers to improve and develop their skills. They are motivated and focused on positive and solution-oriented feedback and ensure that their peers feel supported and empowered to try harder without feeling pressured to initiate academic deviations. In the context of PMH, constructive assessment triggers positive motivation. Female students with a healthy mentality are more positive in seeing peer-assessment opportunities as a formative tool to provide feedback that supports the development of their peers' performance and potential rather than looking for opportunities to threaten and intimidate others. For example, students provide more positive verification and suggestive explanations for poor performance (Ocampo et al., 2024) using rubrics to make the results more valid and reliable (Fadillah & Ha, 2024; Panadero et al., 2013). Ultimately, female students' PMH reflections tend to adhere to the principle of academic integrity because they see learning as a journey of opportunities to improve themselves and their peers over time, not just to obtain numerical grades.

Next, emotions are managed by various subjective pressures. Pressure from friends or the academic environment can cause students to feel stressed and pressured, so they become dishonest in peer-assessments (Iberahim et al., 2013). When students are unable to manage their emotions well, they may be tempted to do things that do not follow the principles of academic integrity, such as assessing the performance of their peers not according to the assessment rubric and increasing academic performance scores even though they do not match the performance produced. Of course, these problems can be controlled by students who have positive mental health. Mental health correlates with social-emotional well-being, favorable mental conditions, and productivity, so students use various personal strategies to promote mental health (Divecha & Acharya, 2024). Students with PMH can manage their emotions more effectively and efficiently. They can identify sources of stress and find ways to deal with them, either through consultation with lecturers or experts, and also take time to reflect on the consequences. With good emotional management skills, students are not easily contaminated by external pressures and are committed to behaving ethically during peer-assessments. Well-managed emotions allow them to stay focused on their mental well-being and long-term academic goals and not get caught up in academic practices that could damage integrity.

Third, believing in one's ability to remain objective at all times. Self-confidence is key to maintaining academic integrity. Through PMH, students who believe in their ability to remain objective are less likely to resist the temptation of sacrificing integrity values. Instead, they expand their peer-assessment experiences to strengthen their self-confidence and self-efficacy and increase their learning autonomy (Adediwura, 2012; Blegur et al., 2019). Factors contributing to increased academic integrity include students gaining direct experience in analyzing their role as peer-assessment, assessing peer performance,



and clarifying disagreements with peers or lecturers regarding their peer review results. These experiences train students to use their authority as peer-assessment with integrity. They analyze, assess, and present their findings for clarification by their peers or lecturers (Blegur, Ma'mun, et al., 2024). They believe that hard work and perseverance will produce good results, even though the process may be longer and more complicated than choosing cheating methods. Positive mental health supports the development of self-confidence because students who have positive thoughts about themselves will find it easier to overcome doubts that often arise amid academic pressure to be accepted in a particular social community. With strong self-confidence, they can maintain objectivity when facing challenging tasks and conducting peer-assessments, and they refuse to take steps that can harm their integrity.

Students do not report peer academic violations only because of social consequences, lack of responsibility, and concerns about welfare and justice (Waltzer et al., 2022). Therefore, this study reports the last experience of students using PMH in maintaining integrity, namely rejecting compromise with various academic deviations. Mental health has various human strengths, including maturity, the dominance of positive emotions, high social-emotional intelligence, subjective well-being, and resilience (Vaillant, 2012), so female students use this modality by not providing room for compromise with deviations to damage their positive emotions. They use peer-assessment to assess the quality of their peers' work with integrity, not their abilities or personal qualities (Lui & Andrade, 2015). If the work or performance produced results from quality manipulation such as cheating, plagiarism, or falsification of academic pressure data, they do not compromise (Asgher et al., 2023). Female students with good PMH choose to reject such compromises because they maintain personal values and understand that cheating not only harms themselves and their peers but also damages the quality of learning. With PMH support, students feel more decisive in making ethical decisions, even when faced with situations that tempt them to break the rules. They believe their integrity is more important than the instant results that can be obtained illegally. Therefore, they are more likely to choose the right path, even though it may be more difficult.

Conclusions

The Spearman correlation indicates a positive and significant relationship between Positive Mental Health (PMH) and integrity in peer assessment, with a coefficient value of $\rho = 0.634$ and a significance of <0.001 . This study also successfully identified four forms of Positive Mental Health (PMH) experiences that play a crucial role in supporting female students in conducting peer assessments with integrity. First, stimulating motivation through constructive assessment. This experience encourages students to provide feedback that is not only objective but also constructive. The aim is to help peers understand their performance shortcomings and support continuous improvement. Second, emotions are managed from various subjective pressures. Female students often face emotional pressures from academic environments, whether sourced from peers, lecturers, or personal expectations. Through PMH, they develop the ability to manage these emotional responses, enabling them to maintain objectivity during the assessment process. Third, believing in one's ability to remain objective at all times. PMH strengthens students' confidence in their academic capacities, allowing them to assess without being influenced by personal closeness or social pressures that may arise during the evaluation process. Fourth, rejecting compromise with various academic deviations. Through PMH experiences, students learn the importance of upholding principles of academic integrity. They become more assertive in rejecting any form of evaluation that does not meet the standards, realizing that such practices harm their peers and negatively impact their professionalism and integrity.

Based on the findings indicating a positive and significant correlation between Positive Mental Health (PMH) and the integrity of female students in conducting peer assessments, universities must design concrete strategies to strengthen students' PMH as a foundation for ethical academic behavior. First, PMH reinforcement should be integrated into various course practices or co-curricular activities that emphasize emotional management, intrinsic motivation, and self-confidence. This step is important to help students understand that mental health is the foundation of ethical academic behavior. Second, peer-assessment training should incorporate PMH-based approaches, focusing on technical aspects but also strengthening empathy, objectivity, and moral responsibility. This training can take the form of case



simulations and reflective discussions. Third, active supervision and post-assessment reflection sessions should be conducted to help students understand the emotional and ethical dynamics they experience during peer assessments. Fourth, universities should provide easily accessible psychological counselling services to support students in dealing with academic pressures that may affect their integrity. Finally, it is essential to build an academic culture that supports PMH and upholds integrity values. This effort serves as the foundation for creating a healthy, fair educational environment oriented towards character development and student professionalism.

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References

- Adediwura, A. A. (2012). Effect of peer and self-assessment on male and female students' self-efficacy and self-autonomy in the learning of mathematics. *Gender and Behaviour*, 10(1), 4492–4508. <https://www.ajol.info/index.php/gab/article/view/76744>
- Adesina, O. O., Adesina, O. A., Adelopo, I., & Afrifa, G. A. (2023). Managing group work: The impact of peer assessment on student engagement. *Accounting Education*, 32(1), 90–113. <https://doi.org/10.1080/09639284.2022.2034023>
- Aryadoust, V. (2016). Gender and academic major bias in peer assessment of oral presentations. *Language Assessment Quarterly*, 13(1), 1–24. <https://doi.org/10.1080/15434303.2015.1133626>
- Asgher, S., Khan, F. U., Murtaza, G., Abid, S., Shabbir, M., Ashraf, S., & Munawar, B. (2023). Factors leading students to academic dishonesty on the university level in Pakistan. *Journal of Education and Social Studies*, 4(3), 836–843. <https://doi.org/10.52223/jess.2023.4344>
- Backman, E., Quennerstedt, M., Tolgfors, B., & Nyberg, G. (2024). Peer assessment in physical education teacher education – a complex process making social and physical capital visible. *Curriculum Studies in Health and Physical Education*, 15(3), 278–288. <https://doi.org/10.1080/25742981.2023.2256327>
- Blegur, J., Ma'mun, A., Berliana, Mahendra, A., Saeful Bakhri, R., & Calunsag, B. D. (2024). Enhancing teaching competence of prospective physical education teachers with integrated learning model. *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan*, 43(3), 588–608. <https://doi.org/10.21831/cp.v43i3.57858>
- Blegur, J., Subarjah, H., Hidayat, Y., Ma'mun, A., Mahendra, A., Mahardika, I. M. S., & Hardiansyah, S. (2024). Peer-assessment academic integrity scale (PAAIS-24). *Emerging Science Journal*, 8(2), 513–526. <https://doi.org/10.28991/ESJ-2024-08-02-09>
- Blegur, J., Wasak, M. R. P., & Rosari, R. (2019). Student's self-confidence restoration with peer mentoring strategy. *European Scientific Journal*, 15(19), 129–148. <https://doi.org/10.19044/esj.2019.v15n19p129>
- Blegur, J., Wasak, M. R. P., Tlonaen, Z. A., & Manggoa, M. A. (2017). Students' behaviour of indiscipline syndrome in teaching and learning process. *Educational Administration Research and Review*, 1(2), 72–78. <https://doi.org/10.17509/earr.v1i2.21421>
- Brown, T., Isbel, S., Logan, A., & Etherington, J. (2020). Predictors of academic integrity in undergraduate and graduate-entry masters occupational therapy students. *Hong Kong Journal of Occupational Therapy*, 33(2), 42–54. <https://doi.org/10.1177/1569186120968035>
- Chu, T., Liu, X., Takayanagi, S., Matsushita, T., & Kishimoto, H. (2023). Association between mental health and academic performance among university undergraduates: The interacting role of lifestyle behaviors. *International Journal of Methods in Psychiatric Research*, 32(1), e1938. <https://doi.org/10.1002/mpr.1938>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, mixed methods approaches* (4th ed.). California: SAGE.
- Dancey, C. P., & Reidy, J. (2020). *Statistics without maths for psychology* (8th ed.). London: Pearson Education.



- Daou, D., Sabra, R., & Zgheib, N. K. (2020). Factors that determine the perceived effectiveness of peer feedback in collaborative learning: A mixed methods design. *Medical Science Educator*, 30(3), 1145–1156. <https://doi.org/10.1007/s40670-020-00980-7>
- Diego, L. A. B. (2017). Friends with benefits: Causes and effects of learners' cheating practices during examination. *IAFOR Journal of Education*, 5(2), 121–138. <https://doi.org/10.22492/ije.5.2.06>
- Divecha, H., & Acharya, V. (2024). Perceptions about positive mental health among university students from Southern India: An occupational perspective. *British Journal of Occupational Therapy*, 87(1), 15–23. <https://doi.org/10.1177/03080226231190312>
- Double, K. S., McGrane, J. A., & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A meta-analysis of control group studies. *Educational Psychology Review*, 32(2), 481–509. <https://doi.org/10.1007/s10648-019-09510-3>
- Eaton, S. E., Pethrick, H., & Turner, K. L. (2023). Academic integrity and student mental well-being: A rapid review. *Canadian Perspectives on Academic Integrity*, 5(2), 34–58. <https://doi.org/10.11575/cpai.v5i2.73748>
- Eaton, S. E., & Turner, K. L. (2020). Exploring academic integrity and mental health during COVID-19: Rapid review. *Journal of Contemporary Education Theory & Research*, 4(1), 35–41. <https://doi.org/10.5281/zenodo.4256825>
- Espey, M. (2022). Gender and peer evaluations. *The Journal of Economic Education*, 53(1), 1–10. <https://doi.org/10.1080/00220485.2021.2004277>
- Fadillah, S. M., & Ha, M. (2024). Using rubrics to enhance accuracy of peer assessment and self-judgment in biology learning. *Asia-Pacific Science Education*, 10(2), 265–288. <https://doi.org/10.1163/23641177-bja10080>
- Fishman, T. (2014). *The fundamental values of academic integrity* (2nd ed.). New York: International Center for Academic Integrity.
- Gurbanov, E. (2016). The challenge of grading in self and peer-assessment (undergraduate students' and university teachers' perspectives). *Journal of Education in Black Sea Region*, 1(2), 82–91. <https://doi.org/10.31578/jeb.v1i2.21>
- Hyseni Duraku, Z., Davis, H., & Hamiti, E. (2023). Mental health, study skills, social support, and barriers to seeking psychological help among university students: A call for mental health support in higher education. *Frontiers in Public Health*, 11, 1220614. <https://doi.org/10.3389/fpubh.2023.1220614>
- Iberahim, H., Hussein, N., Samat, N., Noordin, F., & Daud, N. (2013). Academic dishonesty: Why business students participate in these practices? *Procedia - Social and Behavioral Sciences*, 90, 152–156. <https://doi.org/10.1016/j.sbspro.2013.07.076>
- International Centre for Academic Integrity. (2021). *Fundamental values of academic integrity* (3rd ed.). New York: International Centre for Academic Integrity. https://academicintegrity.org/images/pdfs/20019_ICAI-Fundamental-Values_R12.pdf
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18(1), 3–20. <https://doi.org/10.1177/1525822X05282260>
- Jabbarov, R., Azimzadeh, N., Namazova, G., Abbasova, N., & Guliyev, C. (2024). The impact of mental health on students' academic performance. *South Eastern European Journal of Public Health*, 25(S1), 2517–2527. <https://doi.org/10.70135/seejph.vi.2488>
- Jalilzadeh, K., Rashtchi, M., & Mirzapour, F. (2024). Cheating in online assessment: A qualitative study on reasons and coping strategies focusing on EFL teachers' perceptions. *Language Testing in Asia*, 14(1), 29. <https://doi.org/10.1186/s40468-024-00304-1>
- Khalil, S., Aqil, F., & Jadoon, N. us S. (2024). Role of academic integrity in the relationship between impostor phenomenon and mental health among university students. *Annals of Human and Social Sciences*, 5(3), 403–410. [https://doi.org/10.35484/ahss.2024\(5-III\)38](https://doi.org/10.35484/ahss.2024(5-III)38)
- Langan, A. M., Wheeler, C. P., Shaw, E. M., Haines, B. J., Cullen, W. R., Boyle, J. C., Penney, D., Oldekop, J. A., Ashcroft, C., Lockey, L., & Preziosi, R. F. (2005). Peer assessment of oral presentations: Effects of student gender, university affiliation and participation in the development of assessment criteria. *Assessment & Evaluation in Higher Education*, 30(1), 21–34. <https://doi.org/10.1080/0260293042003243878>



- Lester, J. N., Cho, Y., & Lochmiller, C. R. (2020). Learning to do qualitative data analysis: A starting point. *Human Resource Development Review*, 19(1), 94–106. <https://doi.org/10.1177/1534484320903890>
- Lui, A., & Andrade, H. (2015). Student peer assessment. In *Encyclopedia of Science Education* (pp. 1003–1005). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-007-2150-0_461
- Lukat, J., Margraf, J., Lutz, R., Der Veld, W. M., & Becker, E. S. (2016). Psychometric properties of the positive mental health scale (PMH-scale). *BMC Psychology*, 4, 8. <https://doi.org/10.1186/s40359-016-0111-x>
- Mokhtari, M., Dehghan, S. F., Asghari, M., Ghasembaklo, U., Mohamadyari, G., Azadmanesh, S. A., & Akbari, E. (2013). Epidemiology of mental health problems in female students: A questionnaire survey. *Journal of Epidemiology and Global Health*, 3(2), 83–88. <https://doi.org/10.1016/j.jegh.2013.02.005>
- Morris, E. J. (2018). Academic integrity matters: Five considerations for addressing contract cheating. *International Journal for Educational Integrity*, 14(1), 15. <https://doi.org/10.1007/s40979-018-0038-5>
- Mumpuni, K. E., Priyayi, D. F., & Widoretno, S. (2022). How do students perform a peer assessment? *International Journal of Instruction*, 15(3), 751–766. <https://doi.org/10.29333/iji.2022.15341a>
- Munni, B. E. (2021). Students' perspective on peer assessment activities: An investigation into the challenges. *Dialogics: A Research Journal of English Studies*, 1(1), 163–180. <https://www.researchgate.net/publication/373439756>
- Nofziger, A. C., Naumburg, E. H., Davis, B. J., Mooney, C. J., & Epstein, R. M. (2010). Impact of peer assessment on the professional development of medical students: A qualitative study. *Academic Medicine*, 85(1), 140–147. <https://doi.org/10.1097/ACM.0b013e3181c47a5b>
- Norwich, B., Moore, D., Stentiford, L., & Hall, D. (2022). A critical consideration of 'mental health and wellbeing' in education: Thinking about school aims in terms of wellbeing. *British Educational Research Journal*, 48(4), 803–820. <https://doi.org/10.1002/berj.3795>
- Ocampo, J. C. G., Panadero, E., & Díez, F. (2023). Are men and women really different? The effects of gender and training on peer scoring and perceptions of peer assessment. *Assessment & Evaluation in Higher Education*, 48(6), 760–776. <https://doi.org/10.1080/02602938.2022.2130167>
- Ocampo, J. C., Panadero, E., Zamorano, D., Sánchez-Iglesias, I., & Díez Ruiz, F. (2024). The effects of gender and training on peer feedback characteristics. *Assessment & Evaluation in Higher Education*, 49(4), 539–555. <https://doi.org/10.1080/02602938.2023.2286432>
- Ostafichuk, P. M., & Sibley, J. (2019). Self-bias and gender-bias in student peer evaluation: An expanded study. *Proceedings of the Canadian Engineering Education Association (CEEA)*, 1–8. <https://doi.org/10.24908/pceea.vi0.13864>
- Panadero, E., Romero, M., & Strijbos, J.-W. (2013). The impact of a rubric and friendship on peer assessment: Effects on construct validity, performance, and perceptions of fairness and comfort. *Studies in Educational Evaluation*, 39(4), 195–203. <https://doi.org/10.1016/j.stueduc.2013.10.005>
- Pérez, M. C. I., Vidal-Puga, J., & Juste, M. R. P. (2022). The role of self and peer assessment in higher education. *Studies in Higher Education*, 47(3), 683–692. <https://doi.org/10.1080/03075079.2020.1783526>
- Pope, N. K. L. (2005). The impact of stress in self- and peer assessment. *Assessment & Evaluation in Higher Education*, 30(1), 51–63. <https://doi.org/10.1080/0260293042003243896>
- Rahmatillah, R., & Fajrita, R. (2022). Analyzing factors affecting the effectiveness of peer assessment in EFL teaching. *Indonesian Journal of Teaching and Teacher Education*, 2(2), 82–86. <https://doi.org/10.58835/ijtte.v2i2.124>
- Saana, S. B. B. M., Ablordeppey, E., Mensah, N. J., & Karikari, T. K. (2016). Academic dishonesty in higher education: students' perceptions and involvement in an African institution. *BMC Research Notes*, 9(1), 234. <https://doi.org/10.1186/s13104-016-2044-0>
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>
- Shui Ng, W., & Yu, G. (2023). Students' attitude to peer assessment process: A critical factor for success. *Interactive Learning Environments*, 31(5), 2967–2985. <https://doi.org/10.1080/10494820.2021.1916762>



- Sousa, F., Alves, T., Gama, S., Jorge, J., & Gonçalves, D. (2024). Studying how social relationships affect peer assessment in an E-learning environment. *Learning Environments Research*. <https://doi.org/10.1007/s10984-024-09505-0>
- Stentiford, L., Koutsouris, G., & Allan, A. (2023). Girls, mental health and academic achievement: A qualitative systematic review. *Educational Review*, 75(6), 1224–1254. <https://doi.org/10.1080/00131911.2021.2007052>
- Stonewall, J. H., Dorneich, M. C., & Rongerude, J. (2024). Evaluation of bias in peer assessment in higher education*. *International Journal of Engineering Education*, 40(3), 543–556. https://www.ijee.ie/1atestissues/Vol40-3/10_ijee4452.pdf
- Teixeira, S., Ferré-Grau, C., Canut, T. L., Pires, R., Carvalho, J. C., Ribeiro, I., Sequeira, C., Rodrigues, T., Sampaio, F., Costa, T., & Sequeira, C. A. (2022). Positive mental health in university students and its relations with psychological vulnerability, mental health literacy, and sociodemographic characteristics: A descriptive correlational study. *International Journal of Environmental Research and Public Health*, 19(6), 3185. <https://doi.org/10.3390/ijerph19063185>
- Topping, K. J. (2009). Peer assessment. *Theory Into Practice*, 48(1), 20–27. <https://doi.org/10.1080/00405840802577569>
- Townsend, M. H., & Bishop Baier, M. (2020). The effect of gender on team-based learning peer assessment in a psychiatry clerkship. *Medical Science Educator*, 30(1), 601–603. <https://doi.org/10.1007/s40670-019-00819-w>
- Vaillant, G. E. (2012). Positive mental health: Is there a cross-cultural definition? *World Psychiatry*, 11(2), 93–99. <https://doi.org/10.1016/j.wpsyc.2012.05.006>
- Vakkou, K. A., Hovardas, T., Xenofontos, N., & Zacharia, Z. C. (2023). Comparing expert and peer assessment of pedagogical design in integrated STEAM education. In O. Noroozi & B. De Wever (Eds.), *The Power of Peer Learning: Social Interaction in Learning and Development* (1st ed., pp. 121–141). Cham: Springer. https://doi.org/10.1007/978-3-031-29411-2_6
- Van Hoe, A., Wiebe, J., Rotsaert, T., & Schellens, T. (2024). The implementation of peer assessment as a scaffold during computer-supported collaborative inquiry learning in secondary STEM education. *International Journal of STEM Education*, 11(1), 3. <https://doi.org/10.1186/s40594-024-00465-8>
- Waltzer, T., Samuelson, A., & Dahl, A. (2022). Students' reasoning about whether to report when others cheat: Conflict, confusion, and consequences. *Journal of Academic Ethics*, 20(2), 265–287. <https://doi.org/10.1007/s10805-021-09414-4>
- Wigati, I., Lestari, W., & Fithriyah, M. (2023). Gender study: Implementation of peer assessment of women's scientific attitudes in supporting academic achievement on female students in Indonesia (Case study at the Indonesian State Islamic University in Palembang). *American Journal of Educational Research*, 11(9), 562–567. <https://doi.org/10.12691/education-11-9-4>
- Xiao, Y., & Lucking, R. (2008). The impact of two types of peer assessment on students' performance and satisfaction within a Wiki environment. *The Internet and Higher Education*, 11(3–4), 186–193. <https://doi.org/10.1016/j.iheduc.2008.06.005>
- Zhang, J., Peng, C., & Chen, C. (2024). Mental health and academic performance of college students: Knowledge in the field of mental health, self-control, and learning in college. *Acta Psychologica*, 248, 104351. <https://doi.org/10.1016/j.actpsy.2024.104351>

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