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Differences in the Effects of Self-Compassion Subdomains on Emotion Regulation among Nursing Students in Indonesia

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ABSTRACT

Nursing students experience substantial pressure from academic and clinical demands, making them vulnerable to emotional difficulties. Emotion regulation is therefore essential for maintaining psychological functioning, with self-compassion having been identified as a potential protective factor. However, the subdomains of self-compassion may exert varying effects on emotion regulation. Theory suggests that negative components, such as self-judgement and isolation, intensify self-criticism and perceived disconnection, thereby disrupting adaptive emotional processing. This study examined the varying effects of self-compassion subdomains on emotion regulation among Indonesian undergraduate nursing students. A cross-sectional survey was conducted with 162 students from two private universities in Central Java using the Self-Compassion Scale and the Emotion Regulation Questionnaire (ERQ). Emotion regulation was assessed using the ERQ's cognitive reappraisal and expressive suppression subscales, with a composite ERQ score being used as the primary outcome. Self-compassion was measured through its six subdomains and analysed as predictors. Data were analysed using Spearman's correlation and multivariate logistic regression. Total self-compassion showed no significant association with emotion regulation ($\rho = -0.011$, $p = 0.890$). However, self-judgement ($\rho = -0.312$, $p < 0.001$) and isolation ($\rho = -0.355$, $p < 0.001$) demonstrated a significant negative correlation with emotion regulation. A reduced regression model including these subdomains significantly predicted lower emotion regulation ($\Delta X^2 = 27.112$, $p < 0.001$; Nagelkerke $R^2 = 0.206$; area under the curve = 0.715). These findings indicate that self-compassion is a multidimensional construct and that specific negative subdomains can impair emotion regulation. Integrating self-compassion training and structured peer support mechanisms into nursing curricula may strengthen students' emotion regulation in demanding academic and clinical environments.

Keywords: *Emotion regulation, Indonesia, Nursing students, Self-compassion, Self-regulation*

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INTRODUCTION

Nursing students experience significantly higher levels of academic stress than students in other courses due to the demanding nature of nursing education, which integrates rigorous coursework, intensive clinical training, and stringent professional standards (1,2). This multifaceted pressure, which is amplified by strict schedules, frequent assessments, and

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self-doubt regarding competence, has been strongly associated with anxiety, psychological distress, and reduced academic performance (3–6). Additionally, societal and personal expectations further intensify these challenges. In fact, studies have shown that the COVID-19 pandemic introduced new stressors, such as remote learning and social isolation, that have negatively affected focus and mental health (7,8).

Aside from academic demands, nursing students also face substantial clinical stressors during practical training. The heavy theoretical workload, overlapping assignments, and stringent evaluations often elicit anxiety and contribute to burnout, which manifests as emotional exhaustion and diminished learning motivation (9). In clinical settings, students frequently report fear of making errors, supervisory pressure, and difficulty adapting to demanding, high-risk hospital environments (10,11). Stress levels intensify further during direct patient care, as students now need to assume responsibility for patient safety and are expected to demonstrate professionalism early in their training, while simultaneously managing emotional strain when caring for critically ill or terminally ill patients (12,13).

Emotion regulation, a critical skill that allows students to manage stress adaptively (14), is commonly defined as the processes through which individuals monitor, evaluate, and modify their emotional experiences and expressions to meet situational demands (15–17). According to Gross's process model, emotion regulation involves five stages: situation selection, situation modification, attention deployment, cognitive reappraisal, and response modulation (18). Effective use of these strategies can mitigate the adverse effects of academic stress and promote psychological well-being (19). Adaptive coping mechanisms, including sound emotion regulation, have been known to reduce stress and support emotional stability in high-pressure academic environments (4,17). Conversely, poor emotion regulation has been linked to increased academic dissatisfaction and difficulty overcoming educational challenges (20,21).

Among the internal psychological factors, self-compassion has emerged as a vital determinant and an important intrapersonal factor influencing emotion regulation (22). Conceptualised as treating oneself with kindness during moments of difficulty and recognising suffering as part of the shared human experience, self-compassion has been linked to emotional flexibility, improved mental health, and reduced psychological distress (23). Evidence also suggests that self-compassion supports emotional intelligence and professional competency among nursing students (24–26). However, the majority of prior research has examined self-compassion as a global construct, offering limited insights into the differences in the contribution of its specific subdomains to emotion regulation (17, 26–29). Understanding these distinctions is essential, as the subdomains of self-compassion encompass both supportive and potentially detrimental psychological processes that may interact differently with emotion regulation. This theoretical nuance provides a necessary foundation for examining why certain components may function as protective factors while others may heighten emotional vulnerability.

Theoretically, certain negative subdomains, particularly self-judgement and isolation, may disrupt emotion regulation through maladaptive cognitive and affective pathways. Self-judgement, characterised by harsh self-criticism, increases rumination and narrows cognitive flexibility, which hinders the effective use of strategies such as cognitive reappraisal (30–32). Meanwhile, isolation, which involves the perception that one's struggles are unique and disconnected from others, amplifies emotional distress and reduces one's capacity to mobilise adaptive regulatory strategies or social support (33–35). Together, these components heighten self-focused negativity and perceived disconnection, ultimately

compromising emotion regulation, especially in high-pressure academic and clinical contexts.

The present study adopted the six-factor correlated structure of the Self-Compassion Scale (SCS) given that it preserves the theoretical distinctiveness of the six subdomains and allows for the analysis of whether they have differing effects on emotion regulation. Meta-analytic and cross-cultural validation studies have shown that this model provides the best fit, especially compared with one- or two-factor alternatives (28,29). Accordingly, the one-factor model has been considered overly simplistic and fails to capture the complexity of self-compassion, particularly in subdomains such as mindfulness and common humanity, which play important yet distinct roles (36). Meanwhile, the two-factor model (self-compassion vs self-criticism) tends to obscure meaningful differences among subcomponents, making it unsuitable for analysing specific relationships between subdomains and emotion regulation strategies (27,36). Therefore, the present study selected the six-factor model for its superior psychometric precision and used it as a sensitivity analysis to examine the contributions of both general and specific factors.

Furthermore, this limited domain-specific understanding is particularly evident in non-Western contexts, such as Indonesia, where cultural and educational factors may exert varying influences on the manifestation of self-compassion and emotion regulation. Despite the increasing attention on mental health in nursing education, empirical evidence from Southeast Asia remains scarce. As such, addressing this gap is crucial for advancing the theoretical understanding of the relationship between self-compassion and emotion regulation within culturally diverse nursing student populations. Therefore, the present study aimed to clarify how specific self-compassion subdomains influence emotion regulation among Indonesian nursing students, addressing a critical gap in non-Western educational contexts.

METHODS

Study Design and Setting

Between March and July 2023, a cross-sectional study was conducted at two private universities in Central Java, Indonesia, to examine the subdomains of self-compassion and their distinct effects on emotion regulation among nursing students in Indonesia.

Participants

This study targeted undergraduate nursing students from the selected institutions. Among the 183 eligible students, 162 were recruited through purposive sampling based on their willingness to participate. The inclusion criteria included an age of 18 to 24 years and adequate proficiency in Indonesian.

To ensure ethical compliance and control for potential confounding factors, exclusion criteria were applied. Accordingly, students who were receiving psychological or psychiatric treatment, had been clinically diagnosed with severe mental health disorders, provided incomplete questionnaire responses, and withdrew prior to study completion were excluded.

Data Collection

Data were collected online via a structured questionnaire distributed through Google Forms. Academic advisors assisted in disseminating the survey link via WhatsApp groups. Consent was obtained electronically before students proceeded with questionnaire completion. The questionnaire covered three sections: demographic details (age and sex), the SCS, and the Emotion Regulation Questionnaire (ERQ). Among the 183 responses, 162 were complete and usable, whereas 21 were excluded due to missing or inconsistent answers.

Instruments

Self-compassion

Self-compassion was measured using the SCS by Neff, which was adapted for the Indonesian context by Sugianto et al. (37). The scale includes 26 items spanning 6 dimensions: self-kindness, self-judgement, common humanity, isolation, mindfulness, and overidentification. Responses were recorded on a 5-point Likert scale (1 = never to 5 = always), with negative items being reverse-coded. The scale demonstrated high reliability in this study (Cronbach's $\alpha = 0.872$).

Emotion regulation

Emotion regulation was assessed using the ERQ created by Gross and John and translated into Indonesian by Jannah et al. (38). This tool comprises 10 items, divided into two subscales: cognitive reappraisal (six items) and expressive suppression (four items), rated on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Reliability coefficients were $\alpha = 0.824$ overall, with $\alpha = 0.765$ and 0.671 for cognitive reappraisal and expressive suppression, respectively.

Statistical Analysis

Participant demographics were summarised through descriptive analyses. The Shapiro–Wilk test indicated non-normal data distributions for self-compassion and emotion regulation ($p < 0.05$), prompting the use of Spearman's rho for correlation analysis. Multivariate logistic regression was then applied to determine how the six self-compassion subdomains predicted emotion regulation levels. The composite ERQ score was dichotomised into high and low emotion regulation using a median split, allowing the outcome to be analysed using logistic regression and facilitating the interpretation of odds ratios (OR). Age and sex were included as control variables. Variables with p values < 0.25 on bivariate analysis were included in the regression model. Results were reported as OR with 95% confidence intervals, with $p < 0.05$ indicating statistical significance.

RESULTS

The average age of respondents was 21.93 years (SD = 2.21), with the majority being female (75.31%). Among the domains of self-compassion, self-judgement had the highest mean score (M = 15.98, SD = 2.98), followed by self-kindness, mindfulness, overidentification, and common humanity, with the isolation domain having the lowest mean score (M = 11.51, SD = 2.35). Descriptive statistics for the sample are presented in Table 1.

Table 1: Characteristics of respondents (n = 162)

Variables	Mean	SD	F	%
Gender				
Male			40	24.69
Female			122	75.31
Age	21.93	2.21		
Emotion regulation	41.28	11.68		
Self-compassion	79.44	4.30		
Self-kindness	15.92	2.98		
Self-judgement	15.98	2.98		
Common humanity	11.67	2.63		
Isolation	11.51	2.35		
Mindfulness	12.39	2.48		
Overidentification	11.98	2.40		

As shown in Table 2, no significant correlation was found between total self-compassion and emotion regulation ($\rho = -0.011$, $p = 0.890$). However, individual domains exhibited weak to moderate correlations with emotion regulation (ρ ranging from −0.355 to 0.230, $p < 0.001$).

Table 2: Correlation between self-compassion and emotional regulation among nursing students

Variables	ER	SC	SK	SJ	CH	IS	MD	OI
Emotion regulation (ER)	—							
Self-compassion (SC)	−0.011	—						
	< 0.890	—						
Self-kindness (SK)	0.230	0.399	—					
	0.003	< 0.001	—					
Self-judgement (SJ)	−0.312	0.246	−0.438	—				
	< 0.001	0.002	< 0.001	—				
Common humanity (CH)	0.270	0.280	0.467	-0.570	—			
	< 0.001	< 0.001	< 0.001	< 0.001	—			
Isolation (IS)	−0.355	0.057	−0.639	0.491	−0.435	—		
	< 0.001	0.470	< 0.001	< 0.001	< 0.001	—		
Mindfulness (MD)	0.311	0.273	0.616	−0.542	0.538	−0.705	—	
	< 0.001	< 0.001	< .001	< 0.001	< 0.001	< 0.001	—	
Overidentification (OI)	−0.280	0.252	−0.488	0.471	−0.482	0.529	−0.476	—
	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	—

Note: Spearman's rho test.

Logistic regression analysis (Table 3) revealed that self-judgement and isolation significantly influenced emotion regulation. In particular, self-judgement (OR = 0.28, p = 0.002) was associated with a reduced likelihood of effective emotion regulation, indicating a negative impact. Similarly, isolation (OR = 0.32, p = 0.011) was associated with a lower likelihood of effective emotion regulation, suggesting a detrimental effect on emotion regulation. In contrast, self-kindness, common humanity, mindfulness, and overidentification did not significantly affect emotion regulation (p > 0.05), suggesting that these subdomains do not meaningfully predict emotion regulation.

Table 3: A multivariate logistic regression analysis

Predictor	β Estimate	SE	OR	95% CI for OR	*p*-value
Self-kindness	–0.366	0.407	0.69	[0.31, 1.54]	0.368
Self-judgement	–1.265	0.406	0.28	[0.13, 0.63]	0.002*
Common humanity	0.472	0.380	1.60	[0.76, 3.38]	0.215
Isolation	–1.142	0.450	0.32	[0.13, 0.77]	0.011*
Mindfulness	0.441	0.492	1.55	[0.59, 4.08]	0.370
Over-identification	0.390	0.417	1.48	[0.65, 3.34]	0.350

Note: OR = Odds ratio; CI = Confidence interval; SE = Standard error

Table 4 presents the results for multivariate logistic regression analysis. Accordingly, the full model (Model 1a), which included all six self-compassion predictors, showed significant improvement over the null model (ΔX^2 = 31.075, p < 0.001), with Nagelkerke R^2 = 0.233, indicating moderate explanatory power. The reduced model (Model 1b), which retained only self-judgement and isolation, also demonstrated a significant improvement in model fit (ΔX^2 = 27.112, p < 0.001), with a Nagelkerke R^2 of 0.206 and a lower AIC (203.073), indicating a more parsimonious yet sufficiently explanatory model.

Table 4: Model comparison summary for emotion regulation

Model	Deviance	AIC	BIC	ΔX^2	*p*-value	McFadden R^2	Nagelkerke R^2	Tjur R^2	Cox & Snell R^2
Model 0 (Null)	224.184	226.184	229.272	–	–	0.000	0.000	0.000	0.000
Model 1a (Full Model)	193.110	207.110	228.723	31.075	< 0.001	0.139	0.233	0.180	0.175
Model 1b (Reduced Model)	197.073	203.073	212.336	27.112	< 0.001	0.121	0.206	0.157	0.154

Notes: AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion

Model performance metrics summarised in Table 5 show that Model 1b demonstrated acceptable predictive performance, with an accuracy of 0.667 and an Area Under the Receiver Operating Characteristic Curve (AUC) of 0.715, indicating good discriminative ability. Sensitivity (0.718) and precision (0.670) values reflected a balanced capacity to identify actual cases, whereas the moderate Brier score (0.211) indicated reasonably accurate probabilistic predictions. Overall, these findings suggest that Model 1b provided a satisfactory and parsimonious prediction of emotion regulation outcomes.

Table 5: Predictive performance metrics for reduced model (Model 1b)

Metric	Value
Accuracy	0.667
AUC	0.715
Sensitivity	0.718
Specificity	0.610
Precision	0.670
F-measure	0.693
Brier score	0.211
H-measure	0.181

DISCUSSION

The present study demonstrated that, although overall self-compassion was not significantly associated with emotion regulation, specific subdomains, particularly self-judgement and isolation, exerted a distinct, negative influence on nursing students' emotion regulation capacities. These findings suggest that self-compassion is not a universally protective factor but a multidimensional construct, with some subdomains potentially undermining rather than enhancing emotional resilience.

Isolation, both social and emotional, was identified as a critical barrier to effective emotion regulation. Within the framework of self-compassion, isolation reflects the belief that one's suffering or failures are unique and disconnected from the shared human experience (27). Students with high isolation levels tend to feel psychologically alienated, which hinders their capacity for adaptive emotional processing (34,39). Indeed, Castilho et al. (33) found that this dimension was positively associated with depression, anxiety, and emotion regulation difficulties. Although social isolation, such as that experienced during the COVID-19 pandemic, can intensify feelings of disconnection (40,41), isolation within the self-compassion construct primarily involves cognitive–affective mechanisms rather than physical separation from others (35,42). Isolation also has broader psychological implications, as indicated in studies showing that individuals scoring high on this dimension exhibited diminished emotional resilience and a greater tendency toward (43) maladaptive coping strategies (44).

Furthermore, isolation impedes the utilisation of adaptive emotion regulation strategies, such as cognitive reappraisal, which play a crucial role in maintaining psychological well-being (45). Students caught in self-defeating thoughts, such as "I am the only one who failed" or "I am different from others," tend to be less capable of constructive reinterpretation of their emotional experiences (46). Consequently, they become more susceptible to stress and are more likely to rely on maladaptive coping mechanisms, such as emotional suppression (43).

Beyond isolation, self-judgement has also been identified as a major impediment to emotion regulation. Students with higher levels of self-judgement struggled to manage emotional stress, often engaging in rumination and emotional suppression (32,43). This pattern is

consistent with previous research indicating that low self-compassion, particularly high self-judgement, is positively associated with rumination, which in turn exacerbates psychological distress (30,31). Indeed, Luo et al. (47) demonstrated that self-judgement amplifies perceived stress and contributes to anxiety and depression. The persistence of a self-critical mindset reduces students' ability to use constructive emotional strategies, thereby increasing their psychological vulnerability (48). Furthermore, self-judgement impairs students' emotional adaptability in both academic and clinical environments. In fact, Lim and Kim (48) found that self-judging students experienced heightened fear and avoidance during emotionally intense clinical situations, such as caring for terminally ill patients. Moreover, Carmona-Gutiérrez et al. (49) noted that emotional support interventions were less effective for individuals with high self-judgement, which may explain why the students included in our study remained emotionally fragile despite the availability of general support structures. Our findings also support Nam and Park's conclusion that self-judgement is a strong predictor of poor emotional well-being among nursing students (50). Self-judgement has been linked to lower resilience and academic disengagement, consistent with Kotera et al. (51)'s work highlighting how self-judgement reduced motivation and academic performance. This finding suggests a cyclical effect where emotional dysregulation exacerbates academic struggles, further intensifying self-criticism.

Although self-judgement has often been characterised as a maladaptive component within the broader construct of self-compassion, recent literature suggests that certain forms of critical self-reflection can facilitate adaptive functions, particularly in professional and clinical contexts (52). In nursing, reflective self-assessment, encompassing self-evaluative or self-critical components, has been associated with increased awareness of personal competencies and limitations, which promotes professional accountability and clinical competence (49,52). Although excessive self-criticism has been linked to negative psychological outcomes, structured and value-oriented self-reflection can enhance personal insight and motivation for growth, especially in performance-intensive settings such as in clinical contexts (53,54). This evaluative orientation may foster diligence, self-regulation, and adherence to professional standards.

However, self-judgement does not always function solely as a maladaptive characteristic. In professional education contexts, such as nursing, certain forms of reflective self-evaluation may drive professional development. Self-judgement can facilitate the development of emotional atonement and empathic concern, which are the core components of effective and compassionate nursing care (53). Recognising one's fallibility enhances sensitivity towards others' suffering and strengthens interpersonal connectedness (55). Similarly, reflective engagement helps individuals derive constructive lessons from experience, fostering resilience and reducing maladaptive emotional responses (56). Collectively, these findings suggest that, under conditions of emotional balance and reflective integration, self-judgement may support self-regulation, professional identity formation, and clinical competence in nursing education, rather than functioning as a liability (53,55,56).

Cultural context may also help explain the role of self-judgement observed in the current study. Indonesian society is generally characterised by collectivist cultural values that emphasise social harmony, interpersonal responsibility, and sensitivity to others' expectations (57). Within such cultural environments, students are often encouraged to engage in self-reflection and personal evaluation to maintain group harmony and professional responsibility (58). In the context of nursing education, this orientation may foster increased awareness of one's actions, mistakes, and professional duties

(59). Consequently, self-judgement may function not only as self-criticism but also as a reflective process that encourages learning, accountability, and emotional awareness (60). Such reflective self-evaluation may help students reconsider stressful experiences more constructively, which supports more adaptive emotion regulation.

Theoretically, the present study extends the understanding of self-compassion to a multidimensional construct whose subdomains have varying effects on emotion regulation. Our findings challenge the assumption that self-compassion uniformly enhances emotion regulation, emphasising the need to address specific detrimental components, such as self-judgement and isolation. Moreover, the present study offers insights into how cultural contexts, such as Indonesia's collectivist values, may intensify the emotional burden of isolation, necessitating culturally informed interventions.

In practice, these findings underscore the importance of integrating emotion regulation development into nursing education, with particular emphasis on reducing self-judgement and mitigating feelings of isolation. Embedding structured self-compassion training within the curriculum may enable students to cultivate more adaptive emotional responses and decrease reliance on maladaptive coping strategies. Furthermore, educators should be equipped to deliver nonjudgemental, supportive feedback that fosters a learning environment in which students feel psychologically safe, encouraged, and valued. To mitigate isolation, nursing schools should promote peer support initiatives, group reflection activities, and inclusive community-building efforts. Regular mental health screenings can help identify students at risk for poor emotion regulation, enabling timely psychological support. Additionally, online counselling platforms and digital mental health resources can enhance accessibility to care.

Future research should explore the effectiveness of interventions specifically targeting the reduction of self-judgement and enhancement of connectedness within academic settings, particularly among nursing students. Considering the limited ability of cross-sectional research designs, such as that employed in the current study, to establish causal inferences, longitudinal studies are necessary to assess the influence of persistent isolation on long-term emotional and academic outcomes. Furthermore, the participants in the current study were confined to two private universities in Central Java, which limits the generalisability of our findings to broader or culturally diverse populations. Hence, cross-cultural investigations are needed to better understand how cultural factors mediate the influence of self-compassion subdomains on emotion regulation. Moreover, future research should examine other moderating variables, such as social support, spirituality, and personality traits, to develop a more comprehensive model of emotional resilience in nursing education. The exclusion of external factors, along with reliance on quantitative methods, also limits the depth of insight into students' lived experiences, suggesting that qualitative approaches could further enrich understanding of these complex psychological dynamics.

Study Limitations

Several limitations should be acknowledged when interpreting the findings of this study. First, the cross-sectional design of this study prevented causal inferences regarding the relationship between self-compassion subdomains and emotion regulation. The observed associations should therefore be interpreted as correlational rather than directional. Longitudinal or experimental studies are needed to better understand the causal pathways between these psychological constructs. Second, the relatively modest sample size and recruitment from only two private universities in Central Java limit the generalisability of

our findings to broader nursing student populations in Indonesia. Differences in institutional environments, academic structures, and regional cultural contexts may influence students' emotional experiences. Future studies should therefore include larger and more diverse samples across multiple universities and regions.

CONCLUSION

Self-judgement and isolation can undermine nursing students' capacity for emotion regulation. Incorporating self-compassion and peer support modules into nursing education may strengthen emotion regulation in demanding academic and clinical.

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ETHICAL APPROVAL

Ethical approval for this study was provided by the Health Research Ethics Committee at Universitas Kusuma Husada (Reference No. 433/UKH.L.02/EC/III/2022). Participation was voluntary, and written consent was obtained from all students. For those under 21, additional parental or guardian consent was secured. Participant confidentiality and anonymity were safeguarded throughout the study, following the ethical standards of the Declaration of Helsinki.

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