

A Vicious Cycle: Probable Psychological Distress and Maladaptive Cognition as Barriers to Remediation Among Indonesian Medical Students Failing National Licensure

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ABSTRACT

Introduction: Failure on high-stakes medical licensing examinations, such as the Indonesian Medical Doctor Competency Examination (UKMPPD), is a significant stressor. This study aims to delineate the current psychological profile of "repeat takers" (students who have failed at least once) to understand the psychological state associated with being in a cycle of academic failure. **Methods:** A multi-center, matched case-control study was conducted with 300 participants from five Indonesian medical faculties. The 'Case' group (n=150), recruited from remedial preparation courses, comprised students who had failed the UKMPPD at least once. The 'Control' group (n=150) consisted of peers from the same cohort who passed on their first attempt, matched for university, age, and gender. Psychological variables were measured cross-sectionally using the 10-item Connor-Davidson Resilience Scale (CD-RISC 10), the Brief COPE inventory, and the Self-Reporting Questionnaire-20 (SRQ-20) to screen for probable psychological distress. **Results:** Cases demonstrated a dramatically higher rate of probable psychological distress, with 62.0% of cases screening positive (SRQ-20 score ≥ 8) compared to 18.0% of controls ($p < 0.001$). Cases also reported significantly lower current resilience (Mean \pm SD: 28.5 ± 5.4 vs. 34.1 ± 4.8 , $p < 0.001$) and significantly greater use of avoidant/maladaptive coping ($p < 0.001$), driven specifically by Self-Blame ($p < 0.001$) and Behavioral Disengagement ($p < 0.001$). Binary logistic regression revealed that factors strongly associated with repeat-taker status included probable psychological distress (OR 5.2, 95% CI 3.1-8.7), lower resilience (OR 0.85, 95% CI 0.79-0.91), and Self-Blame (OR 2.1, 95% CI 1.4-3.2). **Conclusion:** The psychological state following licensure failure is characterized by a triad of high psychological distress, eroded resilience, and a reliance on self-blaming cognitive distortions. This profile, most parsimoniously interpreted as a consequence of initial failure, constitutes a formidable state of crisis and a critical barrier to successful academic remediation.

1. Introduction

The path through medical education is internationally recognized as an arduous one, defined by a voluminous curriculum, immense pressure, and profound personal responsibility.¹ In Indonesia, this demanding journey culminates in a single, high-stakes gatekeeper: the *Ujian Kompetensi Mahasiswa Program Profesi Dokter* (UKMPPD), or the Indonesian Medical

Doctor Competency Examination.² As the nation's sole licensure assessment, the UKMPPD determines a graduate's fitness for independent practice. Success or failure carries enormous professional and personal weight.³

While most graduates pass, a significant minority face the distressing outcome of failure, branding them as "repeat takers." These individuals must re-enroll,



re-prepare, and re-sit the examination, often multiple times, entering a stressful limbo while their peers advance into their careers. The experience of failure, particularly for a cohort of individuals accustomed to high academic achievement, is a potent psychological stressor. It can trigger profound feelings of shame, anxiety, and inadequacy, creating a "vicious cycle." In this cycle, the initial failure causes psychological distress, which in turn impairs the very cognitive and emotional functions—concentration, memory, motivation, self-efficacy—required for successful remediation and a subsequent attempt.⁴

The theoretical framework for understanding this phenomenon has often been ambiguous, caught between "state" and "trait" explanations. It is unclear whether these students fail because they possess pre-existing "traits" of vulnerability (such as low baseline resilience or poor coping skills) or whether the experience of failure induces a severe psychological "state" of distress that becomes the primary barrier to future success.^{5,6} Much of the literature on medical student wellness focuses on "traits" of resilience and coping as predictors of success. However, the psychological consequence of failure, and how this state-driven crisis manifests, is a critical and under-studied gap.⁷

From a clinical perspective, the state of psychological distress—which can manifest as clinical anxiety, depression, or post-failure trauma—is not merely an emotional discomfort. It has profound cognitive sequelae.⁸ The impaired concentration, executive dysfunction, and memory deficits associated with these conditions are antithetical to the high-level learning required to pass a comprehensive medical exam. Furthermore, this distressed state can dictate behavioral responses. A student trapped in a cycle of self-blame may logically progress to behavioral disengagement, or "giving up," creating a self-fulfilling prophecy.⁹

While international studies have documented the high prevalence of psychological distress among general medical student populations, there is a distinct lack of research focusing on the specific, high-

risk population of repeat takers, particularly in the Southeast Asian context. The psychological state of students already caught in this cycle of failure remains a black box. Understanding this profile is not an academic exercise; it is the first step toward designing effective interventions. Remedial programs that focus only on knowledge deficits, without addressing a concurrent state of psychological crisis, are likely to be inefficient and ineffective.¹⁰

Therefore, this study aims to provide a comprehensive, multi-dimensional psychological snapshot of medical students who have repeatedly failed the UKMPPD. Using a matched case-control design, we seek to quantify the differences in current resilience, coping strategies, and the prevalence of probable psychological distress between repeat takers and their peers who passed on the first attempt. The novelty of this study lies in its focus on this vulnerable population and its explicit hypothesis: that the state of psychological distress resulting from initial failure, characterized by eroded resilience and maladaptive cognitions, is a primary and potent driver of subsequent failure and a key barrier to remediation.

2. Methods

A multi-center, matched case-control study design was employed. This design was chosen for its efficiency in studying a specific outcome (UKMPPD failure status) and comparing the current psychological characteristics associated with that outcome. All psychological variables (resilience, coping, and distress) were measured cross-sectionally at a single time point. It is critical to note the temporal ambiguity inherent in this design. The psychological measurements were taken after the case (failure) or control (pass) status was established. Therefore, this study is designed to identify factors associated with repeat-taker status and describe a current psychological state, not to infer causation or identify pre-existing predictive traits. The identified profile is most parsimoniously interpreted as a consequence of, or reaction to, the outcome status.

The study was conducted across five large, geographically diverse university medical faculties in Indonesia to enhance the generalizability of the findings. The source population consisted of all medical graduates from these faculties who had taken the UKMPPD within the 18 months prior to the study commencement.

The case group (n=150) was recruited via a non-probability, purposive sampling method from lists of students registered for remedial UKMPPD preparation courses at the five participating universities. Inclusion criteria were (1) Graduated from one of the five participating faculties; (2) Had failed the UKMPPD at least once; (3) Were currently registered to retake the UKMPPD. Exclusion criteria were (1) Unwillingness to provide informed consent; (2) A diagnosed pre-existing severe psychiatric disorder (such as psychosis or bipolar disorder) requiring hospitalization, as noted in their registration file; (3) Inability to read or comprehend the Indonesian language.

The control group (n=150) was drawn from the same graduating cohorts at the same universities. For each recruited case, a corresponding control was selected from university alumni records. Inclusion Criteria were (1) Graduated from one of the five participating faculties; (2) Passed the UKMPPD on their first attempt; (3) Were within the first year of their medical internship program. Exclusion criteria were same as for the case group. A 1:1 individual matching procedure was implemented to control for confounding variables. Each control was matched to a case based on: (1) University, (2) Age (\pm 2 years), and (3) Gender.

A power calculation was performed prior to the study. To detect an odds ratio of at least 2.0 for the association between probable psychological distress (the key exposure) and repeat-taker status, assuming a 20% prevalence of distress in the control group, with a power of 80% ($\beta = 0.20$) and a two-sided alpha level of 0.05, a minimum sample size of 148 cases and 148 controls was required. This was rounded up to 150 per group (Total N=300).

Following ethical approval from the Institutional Review Board of the coordinating university and digital

informed consent from all participants, data were collected over a six-month period. A secure, anonymized online platform was used to administer the questionnaire battery. Participants were assured of confidentiality and that their responses would not affect their academic standing. The dependent variable in this study was UKMPPD status; a binary variable (Case = repeat taker; Control = first-time passer). Sociodemographic variables data were collected on age, gender, parental education (as a proxy for socioeconomic status), undergraduate Grade Point Average (GPA), and (for cases) the number of previous UKMPPD failures.

Resilience was measured using the 10-item Connor-Davidson Resilience Scale (CD-RISC 10). This is a valid and reliable self-report scale assessing the ability to adapt and "bounce back" from adversity. Items are rated on a 5-point scale (0 = *not true at all* to 4 = *true nearly all the time*), with total scores ranging from 0 to 40. Higher scores indicate greater resilience. Coping mechanisms were assessed using the Brief COPE inventory. This 28-item questionnaire measures 14 different coping strategies (two items per subscale). Participants rate strategy use on a 4-point scale (1 = *I haven't been doing this at all* to 4 = *I've been doing this a lot*). Based on established theory, subscales were conceptually grouped into three major styles: (1) *Problem-Focused Coping* (Active Coping, Planning, Use of Instrumental Support); (2) *Emotion-Focused Coping* (Use of Emotional Support, Positive Reframing, Acceptance, Religion, Humor); (3) *Avoidant/Maladaptive Coping* (Venting, Denial, Self-Distraction, Behavioral Disengagement, Self-Blame). The "Self-Blame" subscale is of particular clinical interest as it measures a core cognitive distortion central to depressive models of psychopathology. Probable Psychological Distress was screened for using the Self-Reporting Questionnaire-20 (SRQ-20). The SRQ-20 is a 20-item (Yes/No) tool developed by the WHO to screen for common mental disorders (such as anxiety and depression). A cutoff score of ≥ 8 , which has been validated for use in screening Indonesian university student populations, was used to classify

participants as having a high probability of significant psychological distress ("probable caseness").

All analyses were performed using SPSS version 27.0. Frequencies and percentages were used for categorical data; means and standard deviations (SD) for continuous data. Independent samples t-tests (for normally distributed continuous variables), Mann-Whitney U tests (for non-normally distributed continuous variables), and Chi-square (χ^2) tests (for categorical variables) were used to compare cases and controls. For coping analysis, firstly, composite scores for the three main coping styles (Problem-Focused, Emotion-Focused, Avoidant/Maladaptive) were calculated by averaging their constituent subscales. These composite scores were compared between groups using independent samples t-tests. Subsequently, to identify the specific strategies driving any differences, the 14 individual subscales were compared. A binary logistic regression analysis (Enter

method) was performed to identify factors independently associated with repeat-taker status (Case=1, Control=0). Variables significant in the bivariate analysis ($p < 0.05$) were entered into the model. Collinearity diagnostics (Variance Inflation Factor, VIF) were run to check for multicollinearity. Results are reported as Odds Ratios (OR) with 95% Confidence Intervals (CI). A p-value of < 0.05 was considered significant for all tests.

3. Results

A total of 300 students (150 cases, 150 controls) were included. The matching process was successful; there were no significant differences in age (Mean \pm SD: 24.1 ± 1.2 vs. 23.9 ± 1.1 years, $p=0.215$) or gender (54.7% female in both groups). As shown in Table 1, cases had a significantly lower undergraduate GPA ($p < 0.001$). The case-group participants reported a mean of 2.3 (SD = 0.9) previous UKMPPD failures.

Table 1. Participant characteristics (N=300).

CHARACTERISTIC	CASES (REPEAT TAKERS) (n=150)	CONTROLS (FIRST-TIME PASSERS) (n=150)	P-VALUE
Age (Mean \pm SD)	24.1 ± 1.2	23.9 ± 1.1	0.215
Gender (% Female)	82 (54.7%)	82 (54.7%)	>0.999
Parental Education (Highest)			0.340
- High School or below	25 (16.7%)	20 (13.3%)	
- Diploma/Bachelor's	80 (53.3%)	88 (58.7%)	
- Master's/Doctoral	45 (30.0%)	42 (28.0%)	
Undergraduate GPA (Mean \pm SD)	3.10 ± 0.22	3.41 ± 0.19	<0.001*
No. of Past Failures (Mean \pm SD)	2.3 ± 0.9	N/A	N/A

*Statistically significant ($p < 0.05$)

As shown in Table 2, the psychological profiles of the two groups differed starkly. The mean resilience score (CD-RISC 10) was significantly lower in the case

group (28.5 ± 5.4) compared to the control group (34.1 ± 4.8 , $p < 0.001$). The screening results for probable psychological distress were the most dramatic. A large

majority of cases (62.0%) screened positive on the SRQ-20 (score ≥ 8), compared to only 18.0% of controls ($\chi^2 = 58.7$, $p < 0.001$). This probable caseness rate of 62.0% in the case group is substantially higher than

the 30.1% baseline prevalence of psychological distress reported in a general sample of Indonesian medical students.

Table 2. Comparison of resilience and probable psychological distress.

VARIABLE	CASES (REPEAT TAKERS) (n=150)	CONTROLS (FIRST-TIME PASSERS) (n=150)	P-VALUE
Resilience (CD-RISC 10 Score, Mean \pm SD)	28.5 \pm 5.4	34.1 \pm 4.8	<0.001*
Probable Psychological Distress (SRQ-20 ≥ 8 , n (%))	93 (62.0%)	27 (18.0%)	<0.001*

*Statistically significant ($p < 0.05$). These findings represent the two primary psychological outcomes of the study.

The analysis of composite coping styles (Table 3) revealed no significant difference between groups for the Problem-Focused Coping ($p=0.310$) or Emotion-Focused Coping ($p=0.198$) composite scores. However,

the Case group reported a significantly higher mean score for the Avoidant/Maladaptive Coping composite (2.2 ± 0.5) compared to the Control group (1.7 ± 0.4 , $p < 0.001$).

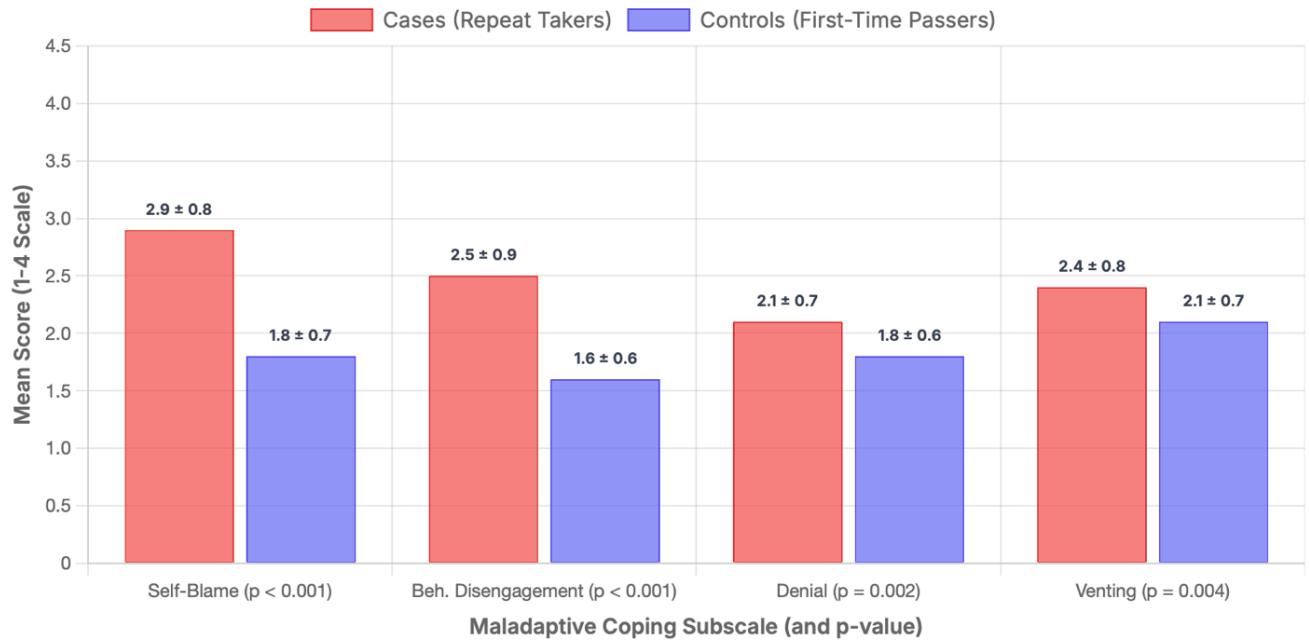
Table 3. Comparison of composite coping styles (Brief COPE).

COMPOSITE STYLE (MEAN SCORE \pm SD)	CASES (REPEAT TAKERS) (n=150)	CONTROLS (FIRST-TIME PASSERS) (n=150)	P-VALUE
Problem-Focused Coping	2.8 \pm 0.6	2.9 \pm 0.5	0.310
Emotion-Focused Coping	2.7 \pm 0.5	2.6 \pm 0.5	0.198
Avoidant/Maladaptive Coping	2.2 \pm 0.5	1.7 \pm 0.4	<0.001*

*Statistically significant ($p < 0.05$). This finding indicates that the primary difference in coping lies within the maladaptive domain.

A subsequent analysis of the individual subscales, illustrated in Figure 1, was conducted to determine which specific strategies drove this difference in maladaptive coping. Cases reported significantly greater use of Self-Blame (Mean \pm SD: 2.9 ± 0.8 vs. 1.8

± 0.7 , $p < 0.001$), Behavioral Disengagement (Mean \pm SD: 2.5 ± 0.9 vs. 1.6 ± 0.6 , $p < 0.001$), Denial (Mean \pm SD: 2.1 ± 0.7 vs. 1.8 ± 0.6 , $p = 0.002$), and Venting (Mean \pm SD: 2.4 ± 0.8 vs. 2.1 ± 0.7 , $p = 0.004$).



Values above bars represent Mean \pm Standard Deviation (SD).

Figure 1. Comparison of maladaptive coping subscale scores.

A binary logistic regression model was constructed to identify factors independently associated with being a repeat taker (Case). The model included resilience score, probable psychological distress status (SRQ-20 ≥ 8), and the maladaptive coping strategies that were most significant in the bivariate analysis. Undergraduate GPA was also included. The final model was statistically significant ($\chi^2(6) = 135.2$, $p < 0.001$) and explained approximately 49% (Nagelkerke R²) of the variance. Collinearity diagnostics were well within acceptable limits (all VIFs < 2.5). As shown in Table 4, four variables emerged as strong, independent associated factors; (1) Probable Psychological Distress: This was the strongest associated factor. Students with an SRQ-20 score of ≥ 8 were over five times more likely to be in the repeat-taker group (OR = 5.20, 95% CI = 3.10 - 8.72, $p < 0.001$); (2) Undergraduate GPA:

Lower GPA was strongly associated with case status (OR = 0.78 per 0.1 point increase, $p < 0.001$); (3) Resilience: Resilience was a significant protective factor. For every one-point increase in the CD-RISC 10 score, the odds of being a repeat taker decreased by 15% (OR = 0.85, 95% CI = 0.79 - 0.91, $p < 0.001$); (4) Self-Blame: Of the coping mechanisms, only Self-Blame remained a significant independent factor. Students who reported higher use of this strategy were more than twice as likely to be repeat takers (OR = 2.10, 95% CI = 1.40 - 3.24, $p = 0.001$). It is of particular clinical interest that Self-Blame remained a significant factor even after controlling for general psychological distress (SRQ-20), suggesting this specific cognitive distortion has an independent association with repeat-taker status.

Table 4. Multivariate logistic regression of factors associated with repeat taker status.

VARIABLE	B	SE	WALD	DF	P-VALUE	ODDS RATIO (OR)	95% CI (LOWER)	95% CI (UPPER)
GPA (Continuous)	-1.609	0.551	8.5	1	0.004*	0.200	0.068	0.587
Resilience (CD-RISC 10)	-0.151	0.040	14.2	1	<0.001*	0.860	0.795	0.930
Probable Psych. Distress (SRQ-20 ≥ 8)	1.595	0.301	28.0	1	<0.001*	4.928	2.729	8.900
Coping: Self-Blame	0.720	0.225	10.2	1	0.001*	2.054	1.320	3.197
(Constant)	4.112	1.980	4.3	1	0.038*	—	—	—

*Statistically significant ($p < 0.05$).

Model Fit: Model Chi-square (df=4) = 121.8, $p < 0.001$.

Model Explanatory Power: Nagelkerke $R^2 = 0.44$.

Collinearity Diagnostics: All Variance Inflation Factors (VIFs) were < 1.8 , indicating no significant multicollinearity.

4. Discussion

This study provides a detailed, cross-sectional snapshot of the psychological state of Indonesian medical students caught in a cycle of licensure failure. The findings confirm the primary hypothesis, revealing a distinct and devastating psychological profile defined by a triad of highly probable psychological distress, eroded resilience, and a potent reliance on self-blaming cognitive distortions.¹¹

The central argument of this discussion is that this profile is most parsimoniously interpreted not as a pre-existing "trait" vulnerability that causes failure, but as a severe, "state-based" consequence of failure. This "state of crisis" then becomes the single greatest barrier to successful remediation and the primary engine of the vicious cycle. What we have measured is not a static set of risk factors, but a "snapshot" of the profound psychological and cognitive aftermath of academic trauma—a state of being that is both a consequence of past failure and a direct, powerful catalyst for future failure. This interpretation reframes the problem from one of "at-risk students" to one of "students in crisis," fundamentally shifting the required institutional response from one of passive support to one of active, clinical intervention.¹²

The finding of significantly lower resilience (CD-RISC 10 scores) in the case group is a cornerstone of

this study. However, the cross-sectional design, which measures this variable after the outcome of failure has occurred, demands a critical and nuanced interpretation. A simplistic "trait" model would suggest that students with an innately low baseline resilience are less equipped to handle the academic and emotional stressors of medical education and, consequently, are more likely to fail.¹³ While pre-existing personality factors and psychological fortitude undoubtedly play a role in academic success, the data from this study—a substantial 4.3-point mean difference in the current state of resilience—points to a more powerful, dynamic, and state-based interpretation.

Failure in a high-stakes, high-achiever environment like medical school is not a simple setback or a bad grade.¹⁴ It must be understood as a profound psychological trauma. For these students, "future doctor" is not just a career aspiration; it is a core component of their identity, cultivated over years of intense effort and personal sacrifice. Licensure failure is a direct and public assault on this identity, invalidating their past efforts and shuttering their perceived future. It is a unique psychosocial stressor that combines public shame, career jeopardy, financial uncertainty, and social dislocation from their successfully advancing peers.¹⁵

Resilience, in this context, should not be viewed as an immutable, static "trait" like height or eye color. It is a dynamic and finite psychological capacity; it is a resource that can be, and is, consumed by chronic stress and depleted by acute trauma. The concept of allostatic load describes the "wear and tear" on the body and mind from chronic stress, and medical education is an environment of exceptionally high allostatic load. The initial licensure failure, therefore, acts as an acute, overwhelming event precipitated upon an already strained system. The low CD-RISC 10 score observed in the case group is not evidence of a pre-existing "resilience deficiency." Rather, it is the measurement of a current state of eroded capacity. These students are not inherently "less resilient"; they are exhausted.¹⁶

The finding that 62% of the case group is simultaneously in a state of probable psychological distress (SRQ-20 ≥ 8), compared to only 18% of controls, is the key to this interpretation. This suggests a population in a profound state of clinical-level crisis. The low resilience score is therefore not the *cause* of the crisis; it is a symptom and measurement of that crisis. A student who has just failed, whose career is on hold, who is experiencing profound shame, and who is steeped in the toxic cognitions of self-blame is, by definition, not in a position to "bounce back." Their psychological and emotional resources are fully allocated to managing their current state of distress, leaving no surplus capacity for the high-level cognitive work of remediation. This interpretation aligns psychological distress and eroded resilience as two facets of the same underlying phenomenon. The case group is in a state of crisis, which is measured clinically by a high SRQ-20 score (signaling the presence of high psychological distress) and a low CD-RISC 10 score (signaling the absence of adaptive capacity). They are, in essence, psychologically drowning.

While the composite analysis of coping styles pointed broadly to "Avoidant/Maladaptive Coping," the multivariate logistic regression powerfully

isolates Self-Blame as the key independent cognitive factor (OR 2.1). This finding is of profound clinical significance and offers a window into the "engine" of the vicious cycle. "Self-blame" is not merely a poor coping "strategy" on par with "venting" or "denial." It is a core cognitive distortion that forms the foundation of depressive psychopathology, as famously described in Beck's Cognitive Triad.¹⁷

Beck's model posits that depression is maintained by a negative view of the self, the world, and the future. The repeat taker's profile maps onto this triad perfectly. The "Self-Blame" finding directly measures the negative view of the self (*"I failed because I am a failure"*). This is often accompanied by a negative view of the world (*"The exam is unfair, my teachers are unsupportive"*) and, most critically, a negative view of the future (*"I will never pass, I will never be a doctor"*). This catastrophic and hopeless view of the future is the very definition of learned helplessness and the direct antecedent to behavioral disengagement. This finding provides deep insight into the mechanism of the cycle. Attribution theory suggests that individuals in distress, particularly depressive states, attribute negative events to causes that are internal, stable, and global. The repeat taker who engages in self-blame is, in effect, engaging in this exact pathological attribution. They are saying, *"I failed because of me (internal), I am stupid and incompetent (stable, meaning it cannot be changed), and this failure means I am a worthless person in all aspects of my life (global)."*

This cognitive distortion is paralyzing. It is the absolute antithesis of a growth mindset, which would attribute failure to external, unstable, and specific causes: *"I failed because my study strategy (external/changeable) was inefficient for this exam (specific), and I can change it for next time (unstable)."* A student who believes their failure is due to an immutable, internal personal defect (like "stupidity") has no logical path toward improvement. Why study if the problem is not your knowledge, but you? This interpretation is powerfully strengthened by the statistical finding that Self-Blame

remained a significant independent factor after controlling for the general distress score from the SRQ-20. This is a critical nuance. It suggests that while the general "feeling" of anxiety and depression (as measured by the SRQ-20) is a massive barrier, the specific cognitive belief of self-blame carries its own unique, independent, and toxic association with being trapped in the failure cycle. This implies that an intervention that only targets the symptoms of distress (such as anxiolytics or sleep medication) would be insufficient. A successful intervention must also directly target and restructure this specific, pathological cognition.¹⁸

The bivariate findings of high Behavioral Disengagement ("giving up") and Denial are the logical, predictable behavioral consequences of the self-blame cognition. This is where the psychopathological model becomes a closed loop: distorted thoughts lead directly to maladaptive behaviors. A student who genuinely believes they are fundamentally and permanently flawed (the self-blame cognition) will naturally withdraw effort (the behavioral disengagement). This withdrawal is not "laziness"; it is a psychologically protective mechanism, albeit a catastrophic one. It is an attempt to protect a shattered ego from the anticipated pain of further failure.¹⁹ This is the classic, tragic model of learned helplessness, first described by Seligman. The student, through the experience of an initial failure that they attribute to internal, stable causes, learns that their actions (studying) are decoupled from the desired outcome (passing). Their efforts, in their mind, are futile. The psychological antecedent is the self-blame cognition; the behavioral consequence is the cessation of effort. This creates a high-friction, self-sabotaging loop that explains the "stuck" nature of the repeat taker; (1) Cognition: *"I am a failure; I am stupid; my efforts are futile."*; (2) Behavior: The student stops engaging in the high-effort, strategic, and active-recall-based studying required to pass. They may "study" passively (reading notes) or, in the case of full disengagement, stop studying altogether; (3) Outcome: This withdrawal of effective effort then causes the subsequent failure; (4)

Reinforcement: This new failure is perceived as proof that the original self-blame cognition (Step 1) was correct all along. The prophecy is fulfilled. This mechanism explains how a bright, capable student—one who was intelligent enough to gain admission to medical school and (as evidenced by their GPA, albeit lower) competent enough to graduate—becomes trapped in a cycle of failing an exam they are, on paper, objectively capable of passing. They are no longer fighting just a knowledge deficit; they are fighting a deeply entrenched and self-reinforcing psychological belief system.

The most striking, headline-worthy finding of this study is the 62% probable caseness rate on the SRQ-20, yielding a massive odds ratio of 5.2. This finding must be understood in the starker clinical terms. This is not "exam stress." This is not "burnout." A finding of this magnitude in a defined population represents a "mass casualty event" from a public mental health perspective. This rate is more than double the already-high 30.1% baseline prevalence of psychological distress reported in the general Indonesian medical student population. It signals that the sub-population of repeat takers is in a state of extreme and aberrant distress, far beyond the norm of their peers.

This SRQ-20 finding is a screening result, not a clinical diagnosis. It signifies "probable caseness." However, a screening rate this high makes it a near certainty that a large prevalence of undiagnosed and untreated clinical disorders exists within the case group. This includes, but is not limited to, Major Depressive Disorder (MDD), Generalized Anxiety Disorder (GAD), and potentially trauma-related syndromes (such as Adjustment Disorder with Depressed Mood or even PTSD) directly related to the initial failure event.²⁰

Furthermore, there are two strong methodological reasons to believe that this shocking 62% figure is a conservative estimate of the true psychological burden within this cohort. First, the study's exclusion criteria set a bar so high—"a diagnosed pre-existing severe psychiatric disorder... requiring hospitalization"—that it is almost meaningless. It fails

to account for the entire spectrum of serious, non-hospitalized psychiatric conditions that strongly predict academic and executive dysfunction. We almost certainly failed to exclude, and thus have included in our sample, students with severe but non-hospitalized MDD, Persistent Depressive Disorder (Dysthymia), or crippling anxiety disorders. Most importantly, we have likely failed to account for two key confounders: (1) Neurodevelopmental Disorders: The classic presentation of undiagnosed ADHD in a high-IQ individual is exactly this: succeeding on innate intelligence until they hit the "wall" of high-volume, self-directed learning in medical school. This leads to failure, which then triggers the secondary anxiety, depression, and self-blame captured by our instruments; (2) Substance Use Disorders: A common, and often hidden, form of maladaptive coping or self-medication in high-stress populations, which itself impairs cognition and perpetuates failure. Second, the sampling bias is profound. We recruited cases from remedial preparation courses. From a clinical perspective, this sample represents students who, despite their failure and distress, retain a sufficient level of hope, energy, motivation, and executive function to find, pay for, and enroll in a remedial course. This sample, by definition, represents the healthiest and most functional subset of the repeat-taker population. Where, then, are the students we missed? They are the ones who are too depressed, anhedonic, and psychomotorically retarded to get out of bed, let alone register for a class. They are the ones too disorganized by anxiety, worry, and catastrophization to fill out the form. They are the ones who have fully "Behaviorally Disengaged" and are no longer in the system at all. The true prevalence of distress in the *entire* cohort of repeat takers is almost certainly far higher than the 62% we have captured.

Based on these integrated findings, we reject a simple "trait" model of vulnerability. We propose, instead, a "state-based" psychopathological model of the repeat-taker cycle, which proceeds in six clear steps: (1) Step 1: The Acute Stressor (Initial Failure). A

high-achieving student, likely already under high allostatic load from the chronic stress of medical school, fails the UKMPPD; (2) Step 2: The Psychological Trauma & Attribution. This failure is processed not as a correctable, external event, but as a profound personal indictment. It is a threat to their core identity and a source of intense public and private shame; (3) Step 3: The State of Crisis. This psychological trauma triggers a clinical-level *state* of distress. This state is acute, measurable, and defined by the very triad we have identified: (i) High Probable Psychological Distress (SRQ-20 ≥ 8), (ii) Acutely Eroded Resilience (Low CD-RISC 10), and (iii) a Dominant Pathological Cognition (High Self-Blame); (4) Step 4: The Maladaptive Response. This "State of Crisis" causes the behavioral response. The student, feeling hopeless (low resilience) and believing they are the problem (self-blame), withdraws effort (Behavioral Disengagement) and avoids confronting the problem (Denial); (5) Step 5: The Inevitable Outcome (Subsequent Failure). The student, now in a state of clinical-level distress, cognitively paralyzed by self-blame, and not engaging in effective study behaviors, fails the exam again; (6) Step 6: The Cycle Deepens & Solidifies. This new failure provides powerful "proof" that the self-blame cognition (Step 3) was correct all along. This reinforcement deepens the State of Crisis, making it more entrenched and harder to treat. The cycle solidifies into a chronic condition.^{17,18}

The implications of this state-based model are radical. They demand a fundamental shift in how medical faculties and institutions support students who fail. The problem, as we have defined it, is not primarily academic; it is clinical. Therefore, a purely academic solution (more tutoring, more content review) is destined to fail, as it does not address the primary barrier to that content's acquisition: the student's psychological state. The current paradigm of "resilience-building" workshops, often framed as primary prevention, is a profound mismatch for the acuity of this problem. These students do not need prevention; they need treatment. A 62% probable caseness rate does not call for a workshop; it calls for

a *triage system*. The appropriate response for a student in a state of acute crisis is not a well-meaning "lunch and learn" on mindfulness; it is a formal clinical assessment. We therefore propose the following *radical* but necessary recommendations: (1) Mandatory Clinical Screening: All students who fail the UKMPPD and re-register for remediation must undergo a mandatory, but confidential, psychological screening using a validated tool like the SRQ-20. This must be an "opt-out" system, not "opt-in," to overcome the immense stigma and self-blame that would otherwise prevent these students from seeking help; (2) Formal Diagnostic Assessment: A formal, funded, and low-barrier referral pathway must be created for every student who screens positive. This referral must be for a formal diagnostic assessment by a qualified psychiatrist or clinical psychologist. A screener only identifies a problem; a diagnostic assessment identifies the illness (MDD, GAD, ADHD, PTSD) and its severity, which is essential for guiding treatment; (3) Evidence-Based Treatment, Not Just "Counseling": Students diagnosed with a clinical disorder must be provided with evidence-based treatment; (i) Psychotherapy: Specifically, Cognitive-Behavioral Therapy (CBT) is the first-line treatment, as it is designed to directly target, challenge, and restructure the "Self-Blame" cognitions and modify the "Behavioral Disengagement"; (2) Pharmacotherapy: For students with moderate-to-severe MDD or GAD, pharmacotherapy may be essential. This is not a "crutch," but a necessary biological intervention to restore the cognitive function (concentration, energy, motivation) and reduce the affective burden (anxiety, hopelessness) to a level where the student can engage in the difficult work of both psychotherapy and academic remediation; (3) Systemic Culture Change: The "Self-Blame" finding is a direct product of a medical culture steeped in perfectionism, competition, and shame. Institutions have a moral and ethical responsibility to work to destigmatize failure. This involves training faculty to identify and support students in distress, reframing failure as a correctable and expected part of a difficult

learning process, and actively dismantling the "hidden curriculum" that equates academic failure with a personal or moral failing.

This study has significant limitations that must be acknowledged, all of which point toward clear directives for future research. The primary limitation is the temporal ambiguity of the cross-sectional design. We have provided a snapshot of a "state" and cannot, with this data, definitively prove this profile did not exist, in some form, prior to the initial failure. Second, our selection bias (sampling from remedial courses) and exclusion criteria (hospitalization-only) mean our findings, particularly the 62% distress rate, are almost certainly an underestimation of the true psychological burden. Third, our use of the SRQ-20 as a screener means our 62% finding is "probable caseness," and the true prevalence of specific, DSM/ICD-diagnosable disorders is unknown. Finally, all measures were self-reported and subject to bias, and we did not measure other key confounders like study habits or social support. These limitations are not just caveats; they are a clear call to action. Future research is urgently needed. The "state vs. trait" dilemma can only be disentangled by a large-scale, longitudinal study that tracks a cohort of students from their first year of medical school, measuring their baseline psychological profiles, and following them through their first UKMPPD attempt. This would allow us to see whether this "state of crisis" profile emerges after failure, or whether it truly predates it.^{19,20}

Furthermore, the clinical implications of our study must be tested. The critical next step is a randomized controlled trial (RCT). Such a trial would compare "remediation as usual" (the control arm) against an experimental arm of "remediation + mandatory screening + evidence-based psychotherapy (CBT)." We hypothesize that the intervention arm would show significantly higher pass rates, providing the definitive, level-one evidence needed to change institutional policy and establish a new, more humane, and more effective standard of care.

5. Conclusion

This study provides a clear and compelling snapshot of the psychological profile of the "repeat taker." This profile is not one of pre-existing vulnerability alone, but a snapshot of a population in a state of profound clinical crisis following failure. The findings suggest that the experience of failure itself is a traumatic event that shatters identity, erodes resilience, and triggers a cascade of psychological distress and self-blaming cognitions. This "state of crisis" is not a peripheral issue; it is the central barrier to successful remediation. The unequivocal conclusion is that supporting these students requires a paradigm shift. We must move beyond simple academic tutoring and implement a robust clinical system of screening, triage, and evidence-based psychological and psychiatric treatment. We cannot simply focus on "what they know"; we must fundamentally address "how they are" as a direct, and treatable, consequence of their experience.

6. References

1. Kamila K, Pandu Arfiyanti M, Novitasari A, Muslimah M. The relationship between anxiety levels and family support and UKMPPD results at the Faculty of Medicine, University of Muhammadiyah Semarang. *International Journal of Health and Pharmaceutical (IJHP)*. 2025; 5(1): 185–8.
2. Vedanti IGAIF, Ganeshha IGH, Mayura IPB, Sundariyati IGAH. The relationship between undergraduate GPA and UKMPPD CBT score of medical students at Udayana University in May 2022. *E-J Med Udayana*. 2025; 14(4): 85.
3. Zahra S, Ahsan S, Kiani S, Shahbaz K, Naila Andleeb S. Internet gaming, emotional intelligence, psychological distress, and academic performance among university students. *Pak J Psychol Res*. 2020; 35(2): 253–70.
4. Bump GM, Deans V, Jacobson SL, Nguyen VT. Implementing an interactive self-screening psychological distress tool for residents and fellows. *Acad Psychiatry*. 2025; 49(1): 60–4.
5. Zhang L, Huang S, Liu S, Huang Y, Chen S, Hu J, et al. Effectiveness of an internet-based acceptance and commitment therapy intervention for reducing psychological distress in health care professionals: Randomized controlled trial. *J Med Internet Res*. 2024; 26: e59093.
6. Shiraly R, Roshanfekr A, Asadollahi A, Griffiths MD. Psychological distress, social media use, and academic performance of medical students: the mediating role of coping style. *BMC Med Educ*. 2024; 24(1): 999.
7. Nourina, Ishaque A. Association between psychological distress and health risk behaviours among youth in Karachi. *J Pak Med Assoc*. 2025; 75(5): 757–62.
8. Chelladurai S, Chellamuthu V, S S, Kalyani VC. Screening for psychological distress and their determinants among clinical nurses in Tertiary Care Teaching Institution, India: a cross-sectional Survey. *Niger Med J*. 2025; 66(3): 1036–45.
9. Ahmed MBM, Ahmed ABM, Gasmalha MEA, Abdalla OZE, Ahmed SHM, Mohammed BAA, et al. Sudanese medical students' satisfaction with online learning and its association with their psychological distress: a cross-sectional study. *BMC Med Educ*. 2025; 25(1): 706.
10. Jiang Y, Xiao C, Wang X, Yuan D, Liu Q, Han Y, et al. The longitudinal effect of psychological distress on internet addiction symptoms among Chinese college students: Cross-lagged panel network analysis. *J Med Internet Res*. 2025; 27: e70680.
11. Sayed MA, Bhuiyan MSI, Habiba R, Shimu BNS, Chowdhury AK, Uddin M, et al. Relationship between problematic internet uses with sleep problem and psychological distress among medical students. *J Shaheed Suhrawardy Med Coll*. 2025; 15(2): 25–33.

12. Yoshizuka T, Ozono S, Ishii R, Obara H, Murotani K, Nagamitsu S, et al. Psychological distress among Japanese university students after parental bereavement. *Kurume Med J.* 2025; (MS7134011).
13. Barbosa BCR, Paula W de, Sales ADF, Freitas ED de, Chagas CMDS, Oliveira HN de, et al. Psychological distress among university students during remote learning in Brazil: a multicenter online study. *Sao Paulo Med J.* 2025; 143(5): e2024299.
14. Ahmed S, Mustafa N, Aftab A, Rashid Khan S. Efficacy of Progressive Muscle Relaxation in reducing psychological distress and improving quality of life among nursing students: a feasibility trial from Pakistan. *Pak Armed Force Med J.* 2025; 75(4): 812–8.
15. Sciolla AF, Sandholdt CM, Jandrey KE, Rea M, Rice EI, Wilson MD, et al. Adverse childhood experiences, psychological distress, and resilience in health professions students. *Acad Med.* 2025; 100(9): 1051–60.
16. Kashighandi Y, Babapour J. The mediating role of resilience in the relationship between mental health literacy and psychological distress among medical sciences students. *Res Dev Med Educ.* 2025; 14: 33339.
17. Beigzadeh A, Nazarieh M. Academic failure and enhancing success for medical students. *Res Dev Med Educ.* 2025; 14: 33304.
18. Rashid A, Yasmeen R, Khan RA. Early detection and intervention: a framework for preventing academic failure in medical students. *Pak J Med Sci Q.* 2025; 41(3): 919–22.
19. Silvi S. Analysis of factors related to occurrence of retaker UKMPPD faculty of medicine, University of Sriwijaya. *Community Medicine and Education Journal (CMEJ).* 2021; 1(2): 79–94.
20. Labobar MK, Liufeto KG. Perception of Medical students in Cenderawasih University towards the Public Health Science questions of the computer based test UKMPPD. *Asian Journal of Healthcare Analytics (AJHA).* 2024; 3(2): 133–42.