




Locus of Control and Its Relationship with Motivation: Mediated by Grit

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ABSTRACT

Objective: This study aimed to investigate the relationship between locus of control and academic motivation among adolescents, with grit examined as a potential mediating variable.

Methods and Materials: The study employed a descriptive correlational design and was conducted among 380 high school students in Canada, selected based on the Morgan and Krejcie sample size table. Participants completed three standardized instruments: the Rotter Internal-External Locus of Control Scale, the Short Grit Scale (Grit-S), and the Academic Motivation Scale (AMS). Data were analyzed using SPSS-27 to compute descriptive statistics and Pearson correlation coefficients, while Structural Equation Modeling (SEM) was performed using AMOS-21 to evaluate the mediating effect of grit and assess the fit of the proposed model.

Findings: Descriptive analysis showed that the mean scores were 12.86 (SD = 3.47) for locus of control, 3.62 (SD = 0.58) for grit, and 5.14 (SD = 0.76) for academic motivation. Pearson correlations revealed significant positive relationships between all variables: locus of control and grit ($r = .41, p < .001$), grit and motivation ($r = .47, p < .001$), and locus of control and motivation ($r = .36, p < .001$). SEM results indicated a good model fit ($\chi^2/df = 1.90$, CFI = 0.97, RMSEA = 0.048). Grit significantly mediated the relationship between locus of control and motivation, with both direct ($\beta = .25, p = .002$) and indirect effects ($\beta = .18, p < .001$) being statistically significant.

Conclusion: The findings suggest that adolescents with an internal locus of control tend to demonstrate higher grit, which in turn enhances their academic motivation. Grit functions as a key psychological mechanism that strengthens the influence of control beliefs on motivational outcomes, indicating its importance in educational development and intervention planning.

Keywords: Locus of Control, Grit, Motivation, Adolescents, Structural Equation Modeling, Educational Psychology

1. Introduction

Locus of control, introduced by Rotter in social learning theory, refers to the extent to which individuals believe they can control the outcomes of events in their lives. People with an internal locus of control perceive outcomes as contingent on their own behavior, whereas those with an external locus attribute outcomes to luck, fate, or other external factors (Shmidzen & Yukhymenko, 2021). The connection between locus of control and motivation is well-documented. Individuals with an internal locus of control tend to show higher levels of motivation because they believe their actions can lead to desired outcomes, thus engaging more in goal-directed behavior (Li et al., 2024). In contrast, an external locus of control is often associated with passivity and learned helplessness, leading to reduced motivation and academic disengagement (Ganpanturova et al., 2022).

Empirical research further supports this association. For example, Li et al. (2024) found that Chinese adolescents with a more internal locus of control demonstrated stronger academic engagement and higher achievement motivation, highlighting the mediating role of perceived agency in educational settings (Li et al., 2024). In the same vein, Oshakuade et al. (2023) revealed that secondary school students with internal control beliefs had greater academic self-efficacy and were more motivated to achieve high performance in school (Oshakuade et al., 2023). These findings align with theoretical propositions suggesting that individuals who feel in control of their outcomes are more likely to adopt mastery-oriented goals and persevere in the face of obstacles.

Adding further depth to this relationship is the construct of grit, defined as perseverance and passion for long-term goals. Grit, popularized by Duckworth, reflects a sustained effort and consistent interest over time, even when progress is slow or setbacks occur. It is considered a non-cognitive trait that contributes significantly to success across domains, including education, sports, and work. The interplay between locus of control and grit has attracted scholarly attention, with several studies indicating that individuals with an internal locus of control are more likely to exhibit gritty behaviors due to their belief in personal efficacy and responsibility (Saleh et al., 2023). For instance, Saleh et al. (2023) found a significant effect of internal locus of control on academic grit among final-year university students, suggesting that control beliefs may foster the resilience and long-term effort characteristic of grit.

The role of grit as a potential mediator between locus of control and motivation has not yet been fully explored, despite theoretical plausibility. Gritty individuals tend to be self-driven and intrinsically motivated, characteristics often associated with internal control beliefs (Rahmawati & Suciati, 2023). Research by Premkumar et al. (2023) supports this linkage, indicating that motivation and locus of control jointly influence recovery and adherence to treatment among alcohol-dependent individuals (Premkumar et al., 2023). Moreover, Mızrak and Aliyev (2024) emphasized the mediating role of self-regulatory traits in the relationship between parental attitudes, locus of control, and academic motivation, implying that intermediary psychological factors can shape how control beliefs affect motivational states (Mızrak & Aliyev, 2024).

Motivation itself is multifaceted, encompassing both intrinsic and extrinsic components. Intrinsic motivation arises from internal satisfaction or curiosity, while extrinsic motivation is driven by external rewards or pressures. Understanding what drives student motivation is critical for educators and psychologists seeking to design interventions that enhance academic outcomes. Haidari et al. (2023), in a large-scale meta-analytic SEM study, demonstrated that locus of control, motivation, and self-efficacy significantly contribute to student achievement, underscoring the interconnectedness of these psychological variables (Haidari et al., 2023). Similarly, Hajmohammadi and Aghayani (2022) examined gender differences in locus of control and motivation among EFL learners and found internal control to be a strong predictor of academic motivation across both male and female groups (Hajmohammadi & Aghayani, 2022).

Additional insights come from diverse cultural and situational contexts. For instance, Karnati and Sibawaihin (2017) noted that both locus of control and intrinsic motivation significantly affected job satisfaction among teachers, reinforcing the importance of these variables beyond academic settings (Karnati & Sibawaihin, 2017). In organizational contexts, Illays et al. (2024) explored how locus of control moderates the relationship between work motivation and job satisfaction, revealing that internal control enhances motivational effects on satisfaction (Illays et al., 2024). Similarly, Sujadi (2018) found that self-concept and locus of control jointly influence achievement motivation, lending further support to multidimensional frameworks of motivation (Sujadi, 2018).

Cross-disciplinary research continues to affirm the relevance of control beliefs and motivational dynamics.

Irawati (2023) showed how altruism and self-esteem influence volunteering motivation through the mediating role of locus of control, suggesting a complex interplay of personal values and control beliefs (Irawati, 2023). In healthcare, Kusnanto et al. (2019) linked motivation and health locus of control to dietary adherence among diabetic patients, indicating that internal control enhances health-related motivation and behavioral consistency.

Scholars have also explored the developmental and contextual factors that shape locus of control and motivational patterns. Vostokova and Dvornikova (2024) observed that future educators with different control beliefs showed distinct patterns of educational and professional motivation, pointing to the need for early interventions (Vostokova & Дворникова, 2024). Similarly, Zulfa et al. (2017) emphasized the relationship between control beliefs and perceptions of education in shaping students' learning motivation (Zulfa et al., 2017). Połom (2018), studying high school girls, revealed that internal control correlated positively with achievement motivation, further highlighting gendered patterns in motivational development (Połom, 2018). While individual agency plays a critical role in motivational processes, external conditions cannot be ignored. Novitasari et al. (2023) investigated how investment knowledge, locus of control, motivation, and risk tolerance affect financial decision-making among business students, demonstrating that both cognitive and dispositional factors influence goal-oriented behavior.

From a psychological perspective, the interaction between locus of control, grit, and motivation offers a rich field of inquiry. Kropovnitisky (2018) reported that coping strategies, locus of control, and achievement motivation are closely interrelated among managers, highlighting the importance of understanding these variables in adult populations (Kropovnitisky, 2018). Hastuti and Farid (2016) observed similar results among marketing professionals, where internal locus and motivation were associated with higher job satisfaction and performance (Hastuti & Farid, 2016).

Despite the wealth of research, the mediating role of grit in the relationship between locus of control and motivation remains underexplored, particularly among adolescents in Western contexts.

2. Methods and Materials

2.1. Study Design and Participants

This research employed a descriptive correlational design to examine the relationships between locus of control, grit, and motivation among adolescents. The target population consisted of high school students in Canada. A sample of 380 participants was selected based on the sample size determination table developed by Morgan and Krejcie, ensuring adequate statistical power and representation. Participants were recruited from various secondary schools across different provinces using a stratified random sampling method to account for regional diversity. Inclusion criteria required participants to be between the ages of 15 and 18, enrolled in full-time education, and able to complete self-report questionnaires in English. Ethical considerations, including informed consent and confidentiality, were observed throughout the data collection process.

2.2. Measures

2.2.1. Motivation

To assess the level of motivation, the Academic Motivation Scale (AMS) developed by Vallerand et al. (1992) was used. This standardized tool is based on the Self-Determination Theory and includes 28 items grouped into seven subscales: three types of intrinsic motivation (to know, to accomplish, to experience stimulation), three types of extrinsic motivation (external regulation, introjected regulation, identified regulation), and amotivation. Responses are rated on a 7-point Likert scale ranging from 1 (does not correspond at all) to 7 (corresponds exactly). Higher scores in each subscale indicate greater endorsement of that specific type of motivation. The scale has demonstrated strong psychometric properties, with its validity and reliability confirmed across diverse academic populations in numerous studies (Ganpanturova et al., 2022; Haidari et al., 2023; Hajmohammadi & Aghayani, 2022).

2.2.2. Locus of Control

Locus of control was measured using the Rotter Internal-External Locus of Control Scale, developed by Julian B. Rotter in 1966. This widely recognized instrument includes 29 forced-choice items, of which 23 contribute to the final score and six serve as filler items to reduce response bias. Each item presents two alternative statements, one reflecting an internal locus of control and the other reflecting an external locus. The total score ranges from 0 to 23, with

higher scores indicating a more external locus of control. The Rotter scale has been extensively used in psychological and educational research, with numerous studies confirming its reliability (test-retest correlations ranging from 0.65 to 0.79) and construct validity (Illays et al., 2024; Irawati, 2023; Karnati & Sibawaihin, 2017; Kropovnitsky, 2018).

2.2.3. Grit

Grit was evaluated using the Short Grit Scale (Grit-S) developed by Duckworth and Quinn (2009). This concise, validated tool includes 8 items measuring two subscales: Consistency of Interests and Perseverance of Effort. Participants respond on a 5-point Likert scale ranging from 1 (not at all like me) to 5 (very much like me). The overall grit score is calculated as the mean of all items, with higher scores reflecting greater grit. The Grit-S scale has demonstrated acceptable internal consistency (Cronbach's alpha values typically above 0.70) and predictive validity in academic and non-academic settings. Its psychometric properties have been replicated in multiple cultural contexts and age groups (Saleh et al., 2023).

2.3. Data Analysis

Data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics including means, standard deviations, and frequency distributions were

computed to summarize the demographic characteristics and main study variables. To examine the relationships between the dependent variable (motivation) and the independent variables (locus of control and grit), Pearson correlation coefficients were calculated using SPSS version 27. Furthermore, to assess the mediating role of grit in the relationship between locus of control and motivation, Structural Equation Modeling (SEM) was conducted using AMOS version 21. Model fit indices such as Chi-square/df, CFI, TLI, RMSEA, and SRMR were used to evaluate the adequacy of the proposed model.

3. Findings and Results

The sample consisted of 380 high school students from various regions in Canada. Of the total participants, 203 (53.42%) identified as female, and 177 (46.58%) identified as male. In terms of age distribution, 112 students (29.47%) were 15 years old, 126 students (33.16%) were 16 years old, 89 students (23.42%) were 17 years old, and 53 students (13.95%) were 18 years old. Regarding grade level, 94 students (24.74%) were in grade 10, 137 (36.05%) in grade 11, and 149 (39.21%) in grade 12. The majority of the participants, 287 students (75.53%), reported English as their first language, while 93 students (24.47%) reported speaking other languages at home.

Table 1

Descriptive Statistics for Study Variables (N = 380)

Variable	Mean (M)	Standard Deviation (SD)
Locus of Control	12.86	3.47
Grit	3.62	0.58
Motivation	5.14	0.76

The descriptive statistics in Table 1 indicate that the mean score for locus of control was 12.86 (SD = 3.47), suggesting a moderate tendency toward internal control (given the range of 0–23 on Rotter's scale). The average grit score was 3.62 (SD = 0.58), which reflects a relatively high level of perseverance and consistency of interest on a 5-point scale. The motivation variable had a mean of 5.14 (SD = 0.76), indicating a generally high level of academic motivation among the participants based on the 7-point Academic Motivation Scale.

Before conducting the main analyses, statistical assumptions were tested and confirmed. Normality was assessed through skewness and kurtosis values, which

ranged between -0.74 and +0.91, indicating acceptable limits for all variables. The Kolmogorov-Smirnov test was non-significant for grit ($p = 0.108$) and motivation ($p = 0.127$), but slightly significant for locus of control ($p = 0.042$); however, given the large sample size ($N = 380$), the data were considered approximately normal based on visual inspection of Q-Q plots and histograms. Linearity and homoscedasticity were examined through scatterplots and showed no major violations. Multicollinearity was checked using Variance Inflation Factor (VIF) values, all of which were below 2.1, confirming the absence of multicollinearity. These results indicate that the assumptions for Pearson correlation and SEM analyses were adequately met.

Table 2*Pearson Correlations Between Variables (N = 380)*

Variable	1	2	3
1. Locus of Control	—		
2. Grit	.41** (p < .001)	—	
3. Motivation	.36** (p < .001)	.47** (p < .001)	—

As shown in Table 2, locus of control was significantly and positively correlated with grit ($r = .41$, $p < .001$) and with motivation ($r = .36$, $p < .001$). Grit was also positively and significantly correlated with motivation ($r = .47$, $p < .001$). These results suggest that individuals with a more internal

locus of control are more likely to exhibit grit and higher levels of academic motivation. The strength of the associations, particularly between grit and motivation, supports the hypothesis that grit plays a mediating role.

Table 3*Model Fit Indices for the Structural Equation Model*

Fit Index	Value	Recommended Threshold
χ^2	91.26	—
df	48	—
χ^2/df	1.90	< 3.00
GFI	0.96	> 0.90
AGFI	0.93	> 0.90
CFI	0.97	> 0.95
RMSEA	0.048	< 0.06
TLI	0.96	> 0.95

The model fit indices presented in Table 3 indicate a good fit between the hypothesized model and the observed data. The chi-square/df ratio was 1.90, below the commonly accepted threshold of 3.00. The GFI (0.96), AGFI (0.93),

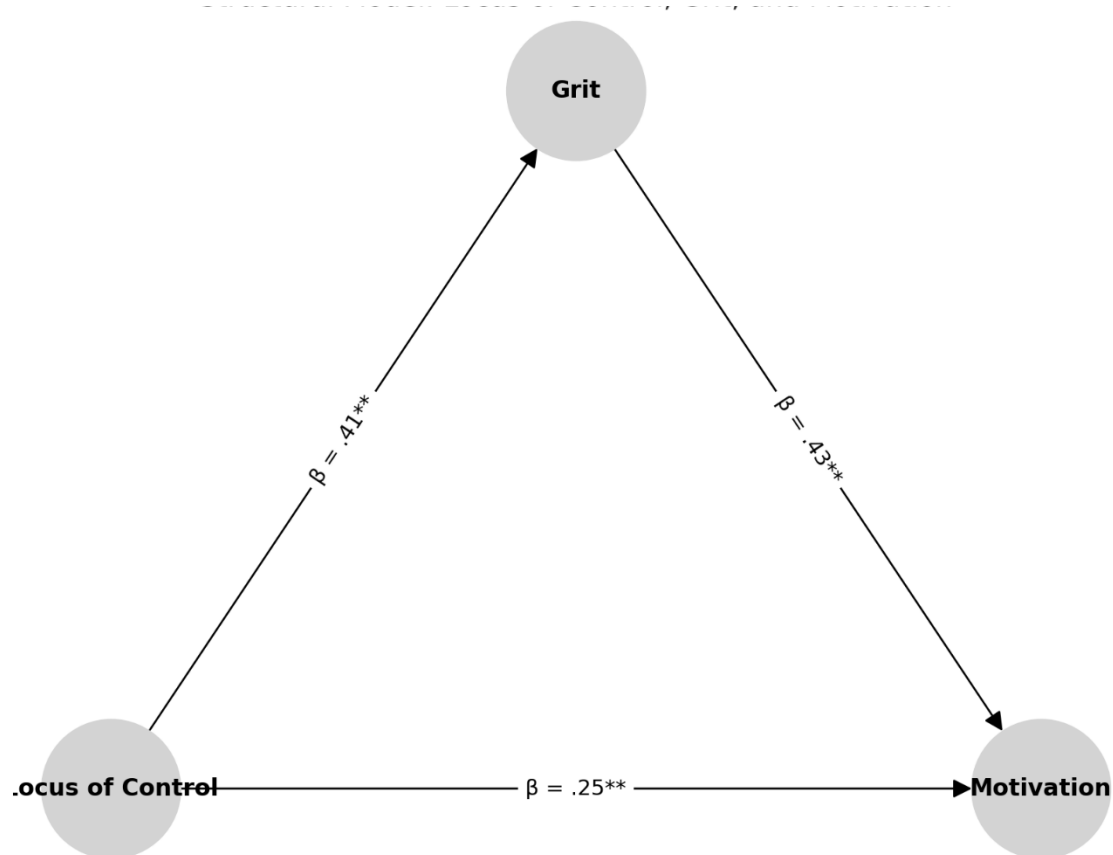
CFI (0.97), and TLI (0.96) all exceeded recommended cutoffs, and the RMSEA value of 0.048 fell within the acceptable range, indicating a well-fitting structural model.

Table 4*Total, Direct, and Indirect Effects Between Variables in the Structural Model*

Path	B	S.E	β	p
Locus of Control → Grit	0.32	0.05	.41	< .001
Grit → Motivation	0.46	0.06	.43	< .001
Locus of Control → Motivation (direct)	0.21	0.07	.25	.002
Locus of Control → Motivation (indirect via Grit)	0.15	0.04	.18	< .001
Locus of Control → Motivation (total)	0.36	0.06	.43	< .001

As displayed in Table 4, the path from locus of control to grit was significant ($B = 0.32$, $\beta = .41$, $p < .001$), indicating that adolescents with a stronger internal locus of control tend to exhibit greater grit. Grit, in turn, significantly predicted motivation ($B = 0.46$, $\beta = .43$, $p < .001$), suggesting that higher levels of grit are associated with increased academic motivation. The direct effect of locus of control on

motivation remained significant ($B = 0.21$, $\beta = .25$, $p = .002$), while the indirect effect through grit was also significant ($B = 0.15$, $\beta = .18$, $p < .001$). The total effect of locus of control on motivation was $B = 0.36$ ($\beta = .43$), indicating that grit partially mediates this relationship. This pattern supports the proposed model and confirms grit as a significant mediator.

Figure 1*Structural Model of The Study*

4. Discussion and Conclusion

The present study investigated the relationship between locus of control and motivation among Canadian adolescents, with grit examined as a mediating variable. Using Pearson correlation and Structural Equation Modeling (SEM), the findings revealed a significant positive correlation between internal locus of control and academic motivation. Furthermore, grit was found to partially mediate this relationship, indicating that students who believe in their ability to influence outcomes (internal control) are more likely to persist in the face of difficulties (grit), which in turn enhances their motivational engagement.

The significant positive association between internal locus of control and motivation aligns with numerous prior findings. For example, Li et al. (2024) reported that adolescents who believe they control their academic outcomes are more likely to show increased achievement motivation and classroom engagement (Li et al., 2024). This finding is echoed by Alipio (2020), who established that internal control beliefs predict academic success due to

increased intrinsic motivation. Similarly, Oshakuade et al. (2023) found that locus of control was significantly correlated with academic motivation and self-efficacy, further affirming the central role of control beliefs in motivational processes (Oshakuade et al., 2023).

The mediating role of grit observed in this study supports emerging psychological models that highlight the importance of non-cognitive traits in motivation. Students with an internal locus of control who believe in their personal agency appear more likely to develop grit—the perseverance and long-term passion to pursue goals. Grit, in turn, reinforces their motivational behavior by encouraging them to overcome setbacks and remain committed to their academic objectives. This pathway is supported by Saleh et al. (2023), who found that internal locus of control significantly enhances academic grit in final-year university students (Saleh et al., 2023). Furthermore, Rahmawati and Suciati (2023) identified a positive association between locus of control, achievement motivation, and study habits among elementary students, suggesting that the development

of personal agency influences sustained learning motivation through behavioral persistence (Rahmawati & Suciati, 2023).

The findings are also consistent with the theoretical model proposed by Haidari et al. (2023), who demonstrated that internal control, self-efficacy, and motivation collectively predict academic performance in a meta-analytic SEM framework. Their work implies that internal beliefs and persistence traits work together to shape motivation and academic behavior (Haidari et al., 2023). Similarly, Premkumar et al. (2023) highlighted that both locus of control and motivational factors significantly influenced treatment adherence, suggesting broader implications of this triadic relationship beyond academic settings (Premkumar et al., 2023).

Furthermore, this study's findings resonate with the work of Mızrak and Aliyev (2024), who examined the mediating role of self-regulation between locus of control and academic motivation, emphasizing that intermediary psychological constructs, such as grit, play a pivotal role in translating control beliefs into motivational outcomes (Mızrak & Aliyev, 2024). By highlighting grit as a mediator, the current study contributes to this line of research by offering empirical evidence for grit's function in sustaining motivation over time, especially when students encounter setbacks or challenges.

Previous research across cultural contexts reinforces the generalizability of these findings. For instance, Ganpanturova et al. (2022) observed that both locus of control and motivation differ between schoolchildren and college students, with internal locus associated with higher achievement motivation across groups (Ganpanturova et al., 2022). Similarly, Hajmohammadi and Aghayani (2022) found that internal control was a consistent predictor of academic motivation across gender groups among EFL learners (Hajmohammadi & Aghayani, 2022). This cross-contextual support confirms that the mechanism linking locus of control to motivation, particularly through grit or similar traits, is not limited to one academic or demographic context.

This study also aligns with the findings of Kropovnitsky (2018), who showed that coping strategies, locus of control, and achievement motivation are significantly interconnected among managers, implying a shared motivational architecture across developmental stages and occupational settings (Kropovnitsky, 2018). Moreover, Hastuti and Farid (2016) found that internal control beliefs and intrinsic motivation contributed to job satisfaction among marketing

professionals, further suggesting that the synergy between control beliefs and sustained effort underpins motivation in both academic and occupational domains (Hastuti & Farid, 2016).

Additionally, the results are consistent with research conducted in organizational and professional domains. Illays et al. (2024) discovered that locus of control moderated the relationship between motivation and job satisfaction among bank employees, suggesting that internal beliefs buffer motivational decline in professional environments (Illays et al., 2024). Karnati and Sibawaihin (2017) similarly emphasized the influence of internal locus of control and intrinsic motivation on teacher job satisfaction (Karnati & Sibawaihin, 2017). These findings highlight that the motivational benefits of internal control extend beyond academic performance to satisfaction, resilience, and long-term engagement in life pursuits.

The mediating function of grit in the present study is further reinforced by studies highlighting its capacity to sustain long-term goals. For example, Irawati (2023) showed that internal control beliefs mediate the influence of altruism and self-esteem on motivation for volunteerism, revealing that sustained behavioral commitment stems from belief in personal influence and moral drive (Irawati, 2023). Likewise, Kusnanto et al. (2019) found that health locus of control and motivation significantly predicted dietary adherence in patients with diabetes, illustrating the practical impact of internal beliefs and perseverance in behavioral contexts (Kusnanto et al., 2019).

The present findings also reflect Vostokova and Dvornikova's (2024) conclusions that students with internal locus of control report more professional and educational motivation, suggesting a developmentally stable relationship between control beliefs and motivation (Vostokova & Дворникова, 2024). Similarly, Połom (2018) found that achievement motivation in female students was significantly predicted by internal control beliefs, further demonstrating the motivational impact of control perceptions in adolescent populations (Połom, 2018). In a related study, Sujadi (2018) showed that locus of control and self-concept significantly influenced achievement motivation, reinforcing the importance of internal psychological traits in motivational processes (Sujadi, 2018).

More broadly, the findings support the conclusions drawn by Zulfa et al. (2017), who identified a strong association between control beliefs and learning motivation in high school students, as well as implications for educational guidance and counseling (Zulfa et al., 2017). Finally,

Novitasari et al. (2023) found that locus of control and motivation were key determinants in students' financial decision-making, underscoring the general applicability of this dynamic in cognitive and behavioral choices (Novitasari et al., 2023).

Despite the study's strengths, several limitations must be acknowledged. First, the use of self-report questionnaires may introduce social desirability bias, where participants respond in a way they believe is favorable rather than truthful. Second, although the sample was relatively large and geographically diverse within Canada, cultural and socio-economic variables were not controlled, which may affect generalizability to other contexts or populations. Third, the cross-sectional design limits the ability to infer causality or the directionality of the relationships among the variables. Longitudinal studies are needed to explore how these variables influence each other over time. Additionally, the mediation model did not account for other possible mediators or moderators, such as self-efficacy, parental influence, or peer motivation, which could further illuminate the mechanisms involved.

Future research should consider employing longitudinal or experimental designs to explore causal relationships and changes in locus of control, grit, and motivation over time. It would also be beneficial to investigate these variables across different cultural, socio-economic, and educational settings to assess their generalizability and cultural sensitivity. Including additional psychological constructs such as academic self-efficacy, emotional regulation, and resilience could provide a more comprehensive understanding of motivational processes. Researchers are also encouraged to explore age-related differences to understand how these traits develop and interact across childhood, adolescence, and early adulthood. Finally, using qualitative methods, such as interviews or focus groups, may uncover contextual nuances and lived experiences that are not easily captured through quantitative surveys.

The findings of this study highlight the need for educational practitioners to foster internal locus of control and grit among students to enhance their motivation. Schools and educators can integrate classroom strategies that promote personal responsibility, autonomy, and goal-setting to develop a stronger sense of agency in students. Programs and workshops that build perseverance, emotional regulation, and long-term goal commitment can also be incorporated into school curricula. School counselors should consider assessing students' control beliefs and grit levels to provide personalized support and interventions. Overall,

creating learning environments that encourage self-directed learning and resilience can help students stay motivated, especially in the face of academic challenges or failures.

5. Limitations & Suggestions

Despite its contributions, this study has several limitations. First, the cross-sectional nature of the data prevents any causal inferences from being drawn regarding the directionality of relationships among variables. Longitudinal studies are needed to determine whether social desirability and shame precede or follow help-seeking behavior over time. Second, the reliance on self-report measures may introduce social desirability bias, especially since the very construct was one of the variables under investigation. Although standard, validated tools were used, the potential for underreporting shame or overreporting positive behavior remains. Third, the sample was limited to participants from Malaysia, which may restrict the generalizability of findings to other cultural or regional populations. Moreover, variables such as gender, socioeconomic status, and prior experiences with mental health services were not explored in depth, though they likely play a significant role in shaping help-seeking tendencies.

Future research should consider using longitudinal or experimental designs to examine how interventions targeting shame reduction or stigma awareness impact actual help-seeking behavior over time. Studies could also explore the role of additional mediating or moderating variables, such as self-compassion, emotional intelligence, or coping styles, in the relationship between social desirability and help-seeking. Gender-specific pathways should be further investigated to better understand how men and women experience shame and how this affects their attitudes toward psychological services. Additionally, qualitative studies could provide richer insights into the lived experiences of individuals navigating these emotional barriers, especially in communities where mental health remains a sensitive topic. Expanding the research to include diverse cultural settings would also contribute to a more global understanding of these psychological dynamics.

Practitioners should prioritize the creation of psychologically safe environments where clients feel accepted and free from judgment. Psychoeducation programs in schools and universities can help normalize emotional struggles and emphasize that seeking help is a sign of strength rather than weakness. Therapists should be

attuned to the presence of shame and social desirability tendencies during clinical assessments and adapt their approaches to address these barriers directly. Confidentiality, anonymity, and culturally sensitive language should be emphasized in outreach efforts to reduce perceived risks associated with disclosure. Moreover, integrating self-esteem enhancement strategies into therapy and prevention programs may weaken the negative impact of shame and facilitate greater openness to psychological support.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

This article is derived from the first author's doctoral dissertation. All authors equally contributed to this article.

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