



# Promoting boarding student engagement regards resiliency and gender: A mediated - moderation analysis

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**Abstract.** This study predicts resilience-based engagement and examines the gender-moderating effect on the prediction. Questionnaires were administered to 106 boarding school students (65 male, 41 female) aged 10 to 20 years ( $M = 15.78$ ,  $SD = 2.15$ ) to measure engagement and resilience attributes. The results of regression showed that engagement was significantly predicted by resiliency. Moderation analysis showed that gender played an effective role in moderating the prediction of engagement by resiliency; the resilience prediction on engagement was greater for females than males. These findings contribute to a deeper understanding of the priorities in the male group to predict engagement based on resiliency variables and suggest that resiliency will drive engagement with greater efficiency in female students.

**Keywords:** Boarding Student, Engagement, Gender, Resiliency.

## 1 INTRODUCTION

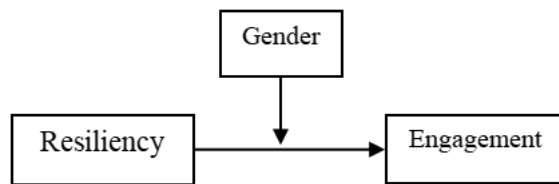
Islamic boarding schools, commonly known as "pesantren," represent a unique and culturally rich educational context deeply rooted in Islamic traditions and values [1]. These institutions play a significant role in shaping students' holistic development by providing academic education and moral, spiritual, and character-based guidance. Within the context of pesantren, the exploration of student engagement and its interplay with resiliency holds particular relevance. Understanding how students engage in their studies, social interactions, and spiritual practices within this distinct environment contributes to both their personal growth and the broader goals of Islamic education.

Student engagement, defined as the extent of a student's active participation, emotional involvement, and motivation in educational activities (Fredricks, 2015 ; Fredricks et al., 2011) aligns closely with the objectives of pesantren education. Pesantren students often immerse themselves in various aspects of Islamic learning, including Quranic studies, Arabic language, and spiritual practices. As such, examining student engagement in pesantren encompasses a comprehensive understanding of how students interact with their studies, instructors, and peers while upholding Islamic principles.

Resiliency is the spring power of an individual in facing problems [4]. Resiliency, a psychological attribute that empowers individuals to navigate challenges, setbacks, and stressors, resonates deeply within the pesantren context. The teachings of Islam emphasize the importance of patience, perseverance, and reliance on God in times of adversity. Therefore, the development of resiliency aligns with the spiritual teachings of Islam and is likely to be a cornerstone of students' personal growth within pesantren. Understanding how resiliency influences students' ability to engage in various aspects of pesantren life is essential for enhancing their well-being and spiritual development.

Gender characteristics have an important role in differences in a person's behavior (Cholili, 2021) Furthermore, the integration of gender dynamics adds a layer of complexity to the exploration of student engagement and resiliency within pesantren. In Islamic traditions, gender roles and interactions are often guided by cultural and religious norms. Therefore, investigating how gender moderates the relationship between resilience and student engagement provides insights into how these factors interact within the pesantren setting, which may differ from other educational contexts.

This study seeks to delve deeper into the interplay between student engagement, resiliency, and gender within the context of Islamic boarding schools (pesantren), see Figure 1. By examining how these factors intersect and influence one another, this research aims to shed light on the unique mechanisms that shape students' experiences, well-being, and holistic development within the framework of Islamic education.



**Figure 1.** Predicting Resiliency on Engagement moderating by Gender

## 2 METHOD

### 2.1 Participant

This study aims to examine the role of Resiliency as a mediator in predicting Attachment on Engagement. Participants of 106 students (65 male, 41 female), aged 10 to 20 years ( $M = 15.78$ ,  $SD = 2.15$ ), residing in pesantren, voluntarily participated in completing the questionnaire.

### 2.2 Measures

*Engagement Scale.* This 10 items instrument measure five aspects of engagement; i.e. Cognitive Engagement, Emotional Engagement, Physical Engagement, Behavioral

Engagement, and Social Engagement [6]. *Resiliency Scale*. This scale consists of 25 items measuring 2 dimensions; i.e. hardiness and perceived stress [7].

*Score reliability*. Score reliability in this research refers to [8] as well as [9] that suggest the use of omega rather than alpha. The omega scores of Engagement and Resiliency were .91 and .94, respectively.

### 2.3 Procedure

Participants respond directly to each statement on the scale by selecting the response: Strongly Disagree, Disagree, Agree, Strongly Agree, following an informed consent.

Participants' responses were calibrated by applying the graded response model [10] to scale the choices on each scale statement (1: Strongly Disagree, 2: Disagree, 3: Agree, 4: Strongly Agree). The application of GRM intended to obtain an accurate estimation of the level of participants' attributes / proficiency. This accuracy is essential so that the score difference truly reflects the difference in the attributes measures. The calibrated proficiency score (-4 to 4) was converted to a scale of 100 with  $M = 50$  and  $SD = 10$  for easier interpretation.

Based on each participant's scores scaled by the GRM method, I analyzed the data in stages as suggested by [11]. First, Engagement was regressed on one predictor, Resiliency. Second, Engagement was regressed on the interaction between Resilience and gender. Third, testing whether gender effectively moderates the predictive power of Resiliency on Engagement. Finally, checking the fulfillment of the regression and moderation model assumptions, including: normality of residuals, linearity, collinearity, homogeneity of variance, and posterior predictive.

## 3 RESULTS

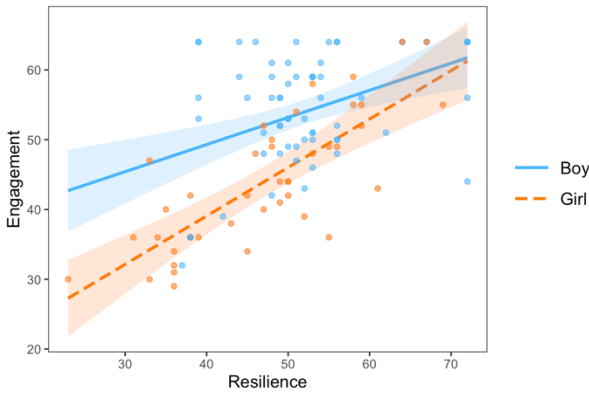
Descriptive statistics of the data presented in Table 1.

**Table 1.** Descriptive Statistics

Var	G	n	M	SD	skew	kurt
1	Boy	65	15.68	2.07	0.02	-1.03
	Girl	41	15.95	2.29	-0.84	-0.1
	Total	106	15.78	2.15	-0.36	-0.63
2	Boy	65	51.77	9.03	0.67	0.27
	Girl	41	47.2	10.64	-0.05	-0.71
	Total	106	50	9.89	0.18	0.14
3	Boy	65	53.88	8.41	-0.67	-0.23
	Girl	41	44.07	9.39	0.3	-0.83
	Total	106	50.08	9.99	-0.31	-0.93

**Note.** 1: Age, 2: Resiliency, 3: Engagement, Var: Variable, G = Group, n = sample size, M = mean, SD = standard deviation, skew = skewness, kurt =

kurtosis



**Figure 2.** The Difference Slope Predicting Resiliency on Engagement between Boy (.39) and Girl (.69)

The model fit showed significant results, with  $F(3,102) = 36.00, p = 0.00, R^2 = 0.51$ . All of the regression coefficients were significant as depicted in Table 2. The difference prediction of Resiliency on Engagement between Boy and Girl presented at Figure 2.

**Table 2.** Regression results using Engagement as the criterion

Predictor	1. <i>b</i>	2. <i>s</i>	
		<i>r</i>	3
4. (Intercept)	5. 33.76**	6. .	7
8. Resilience	9. 0.39**	10. .	11
12. Gender	13. -	14. .	15
	22.43**	0	5
16. Resilience x Gender	17. 0.31*	18. .	19
		0	2
20. Fit: $R^2 = .51^{**}, 95\% CI [.37, .60]$			

Note. *sr*: semi partial correlation

## 4 DISCUSSION

Regression analysis revealed a significant positive prediction of engagement by resiliency ( $b = [.39], p < .05$ ), indicating that higher levels of resiliency were

associated with increased engagement among boarding school students. The moderated-mediation analysis showed a significant interaction between resilience and gender ( $b = [0.31]$ ,  $p < .05$ ). Gender moderated the resiliency-engagement relationship, suggesting that the prediction of engagement by resiliency was more pronounced for girls than boys.

The findings of this study contribute to the existing literature on student engagement and well-being within the boarding school context. The positive prediction of engagement by resiliency aligns with previous research highlighting the role of psychological attributes in fostering engagement (Yang et al., 2023; Yang et al., 2022). Importantly, the gender-moderating effect emphasizes that gender plays a significant role in shaping the relationship between resilience and engagement. This finding suggests that resiliency-enhancing interventions may have a stronger impact on female students' engagement in boarding schools.

## 5 CONCLUSION

This study advances our understanding of the intricate relationship between resilience, gender, and student engagement within the unique context of boarding schools. The findings emphasize the importance of considering gender-specific dynamics when designing interventions to promote student engagement and well-being. Further research could delve into the underlying mechanisms that drive the observed gender differences in the resiliency-engagement relationship.

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