

Islamic Education Management and Character Building in Pesantren: A Gender-Based Rasch Analysis of Santri Forgiveness

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Submitted: 26-12-2025

Revised : 14-07-2026

Accepted: 25-08-2026

ABSTRACT. Islamic boarding schools (*pesantren*) contribute significantly to the development of students' morality, social skills, and emotional characteristics through institutional leadership, educational policies, religious practices, and character development programs. Forgiveness, as a character trait, is often viewed as an individual psychological characteristic. This cross-sectional quantitative study not only explored patterns of forgiveness with respect to participants' gender among the santri but also assessed the quality of a measurement tool, an Indonesian version of the Enright Forgiveness Inventory, using the Rasch model. The participants were 303 santri from *pesantren* in Java, Indonesia, comprising 87 males and 216 females, with a mean age of 15.18 years. The Enright Forgiveness Inventory was first translated from English into Indonesian and then back-translated into English. In addition, the process of cultural adaptation was carried out to ensure the inventory would be well suited to the Indonesian culture. Finally, pilot testing was also conducted. The data were analysed using Winsteps version 5.1.5. The results showed a person reliability coefficient of 0.83, item reliability of 0.99, Cronbach's alpha of 0.84, and a person separation index of 2.22. The Rasch measures explained 47.5% of the raw variance. Item difficulty ranged from +4.67 logits for the most difficult item to -1.33 logits for the easiest item, indicating that the inventory covered different levels of the forgiveness construct. The patterns of the person measures were descriptive. Female santri tended to demonstrate higher levels of forgiveness than male santri. These findings support the use of the Indonesian Enright Forgiveness Inventory within a Rasch measurement framework for evaluating character education outcomes. They also give insights into the development of gender-sensitive character education management in the Islamic *pesantren* system.

Keywords: *Islamic education management; pesantren; forgiveness; gender differences; Rasch model; character education.*

 <https://doi.org/10.31538/munaddhomah.v7i3.3056>

How to Cite Bariyyah, K., Restu Dwi Ariyanto, Laily Tiarani Soejanto, Santy Andrianie, Idat Muqodas, Agung Nugraha, & Julianne Kamelia Riza. (2026). Islamic Education Management and Character Building in Pesantren: A Gender-Based Rasch Analysis of Santri Forgiveness. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, 7(3), 758–773.

INTRODUCTION

Islamic boarding schools (*pesantren*) are central to Indonesia's education system. Besides being centres for religious learning, such schools are also responsible for students' moral, social, and emotional development (Arif et al., 2024; Baihaqi et al., 2023; Hermawan, 2025a; Nurtawab, 2025). As part of Islamic education, *pesantren* are called upon to promote and maintain character education

through leadership, institutional policies, and well-established daily routines (Ardianto et al., 2026; Febrianti et al., 2025; Ikhwan et al., 2025; Mujahidah et al., 2025; R & Thohir, 2024; Rohani et al., 2025; Samsu et al., 2021). The joint roles of the *kyai*, *nyai*, teachers, and dormitory supervisors reflect a collaborative leadership structure in which both educational leadership and organisational culture are key factors in student character development (Ma'arif et al., 2025, 2026; Samsu et al., 2021). Therefore, character building in *pesantren* is not simply a personal or spiritual journey but also a formal educational result of concerted institutional processes. Java is known for having the highest number of Islamic boarding schools in Indonesia, which is why it has been chosen as the focus of the research. Data from the Indonesian Ministry of Religious Affairs indicate that there were 33,102 *pesantren* registered in Banten, DKI Jakarta, West Java, Central Java, the Special Region of Yogyakarta, and East Java in 2025 alone. These *pesantren* have different religious doctrines, management styles, and other aspects. Therefore, the concentration of Islamic boarding schools in Java makes it a particularly interesting setting for our research on forgiveness, which is one of the most important outcomes of character education (Direktorat Jenderal Pendidikan Islam, 2026).

Interpersonal problems among students, as a result of conflicts such as making fun, leaving someone out, speaking aggressively, and bullying, can be regarded as a sign that the *pesantren* character education in *pesantren* has not yet been implemented effectively and systematically (Junaidi & Sahrandi, 2025; Sugara et al., 2026). A recent study involving students in single sex *pesantren* found differences in bullying patterns between male and female students, particularly in verbal bullying and cyberbullying, especially in verbal bullying and cyberbullying (Nawas et al., 2024). Such negative interactions among peers may cause emotional pain, resentment, and even make it hard for the victims to go back to their friends (Ke et al., 2022). That situation provides a sound reason to analyse the differences in the forgiveness processes of male and female santri. As the act of forgiveness shows how people deal with interpersonal injury in their social life and rebuild a constructive interpersonal relationship, the study of forgiveness is not only of the students' psychological development, but also of the character education programs in *pesantren* that need evaluation and management (Cabras et al., 2022; Mróz & Kaleta, 2022). One of the main character traits the *pesantren* seeks to instil is forgiveness. In the Qur'an, forgiveness is accorded prime importance as a virtue derived from, and thus consistent with, the qualities of patience (*ṣabr*), humility, and the maintenance of good relations with others (Brady et al., 2023; Ludwig et al., 2026). Nevertheless, from a management perspective, forgiveness can also be a target behaviour that an educational institution deliberately cultivates through structured programs, a code of conduct, and social-religious routines (Wong, 2024). The performance of the five daily prayers, memorising the Qur'an, participating in halaqah, and other character-building activities are institutional measures that are intended to help students assimilate values such as empathy, self-control, and emotional maturity (Assaad et al., 2025; Nasrullah et al., 2023). Therefore, forgiveness in *pesantren* is only part of the broader orchestration of character education management, in which spiritual activities culminate in structured and supervised educational experiences.

In other words, the research area is not about the lack of publications on forgiveness in particular, but about the fact that forgiveness has been viewed only to a limited extent as a measurable result of Islamic education management in *pesantren* (Cabras et al., 2022; Hasan et al., 2024; Mróz & Kaleta, 2022). Researchers did not explore the potential of using gender-related patterns of forgiveness to support institutional evaluation and data-driven decision-making in character education programs (McDonald & Kanske, 2023; Pang et al., 2023). This deficiency is what inspired the authors of this work. *Pesantren* leaders, when considering character education as a whole, including gender, must also take into account their students' identities. Past research has indicated that boys and girls display different emotions, show different levels of empathy, and respond differently to negative interactions, all of which may influence forgiving tendencies (Nasrullah et al., 2023; Rochat, 2023). Furthermore, the *pesantren* environment as such does not treat these variations simply as individual personality characteristics but rather as outcomes of

interactions among institutional norms, leadership styles, and communal expectations (Nasir & Rijal, 2021). From the perspective of Islamic education management, it is critical to understand gender-specific behavioural patterns when implementing character education programs to ensure they are both efficient and equitable. Recent studies show that emotional intelligence profiles, intolerance of uncertainty, and coping styles accessible to young people determine their levels of emotional vulnerability and adaptation (Mahalli et al., 2026; Septiana et al., 2026; Wulandari et al., 2026; YUSDIANA et al., 2026).

Although *pesantren* play a strategic role in character education, existing studies on forgiveness are predominantly situated within psychological and counselling perspectives, focusing on individual traits such as empathy, emotional regulation, and interpersonal processes (Tapia & Sherman, 2022). In the broader international literature, forgiveness has rarely been examined as an outcome shaped by institutional factors such as leadership practices, structured programs, or educational governance. While some studies have explored character education and school management, they tend to address general moral development rather than specifically linking measurable constructs such as forgiveness to educational management processes, particularly in Islamic educational settings. Consequently, there remains limited understanding of how institutional practices in *pesantren* contribute to the development and distribution of forgiveness among student groups, as well as how these patterns can inform data-driven decision-making in character education programs. This research examines whether male and female *santri* exhibit similar or different levels of forgiveness and further evaluates the measurement quality of the Indonesian version of the Enright Forgiveness Inventory using the Rasch model. In particular, the paper discusses person and item reliability, person and item misfit indices, response category functioning, and the presence of a clear item-difficulty ordering. The paper also explores the possibility that the different forgiveness patterns between male and female *santri* may constitute supporting arguments for the assessment and development of gender-sensitive character education in *pesantren*. Hence, this research seeks to provide evidence that will not necessarily argue for or against the impact of Islamic education management on forgiveness, but to present evidence-based measures that can support character education management.

METHOD

This study employed a cross-sectional quantitative method to investigate whether boys and girls differ in their levels of forgiveness among *santri* and their implications for Islamic education management. The premise of the research was that gender differences might lead to varying levels of forgiveness among *santri*. The study therefore analysed data on male students compared with those on female students for the forgiveness variable using the Rasch model. Although the study focuses on gender as the primary variable of comparison, acknowledging that other factors such as age, socio-cultural background, and level of religious engagement, which may also have influenced the results, were not statistically controlled is one of the study's limitations. Participants were *santri*, students who live and study in *pesantren* (Islamic boarding schools) under the guidance of a *kyai*, who also serves as a key authority figure in daily educational life. Data were collected between February and May 2025 using paper-based surveys across 20 Islamic boarding schools. Participating *pesantren* were selected based on accessibility and willingness to collaborate, and all were located in Java. This regional focus is acknowledged as a limitation, as gender norms in Java may not fully reflect cultural expectations across Indonesia. Ethnic variation may also influence forgiveness and gendered socialisation, particularly norms regarding the expression of hurt and reconciliation. All participants provided assent after receiving information about the study and confidentiality procedures, and written parental or guardian consent was obtained.

The study employed the Enright Forgiveness Inventory (EFI), a 69-item instrument measuring dispositional forgiveness across cognitive, affective, and behavioural dimensions, using a six-point Likert scale (1 = strongly disagree to 6 = strongly agree) (Enright et al., 1995; Enright & Song, 2020). The EFI was translated and culturally adapted into Indonesian by bilingual

experts, following established cross-cultural adaptation guidelines (Alizamar et al., 2018; Andrianie et al., 2024; Ariyanto et al., 2024), including forward translation, expert review, and back-translation to ensure conceptual and semantic equivalence. A pilot test with a small group of *santri* was conducted to assess clarity and cultural relevance, leading to minor revisions. Data screening was conducted using Rasch fit criteria: Outfit MNSQ within 0.50–1.50 (Bariyyah, Andrianie, et al., 2025). Outfit ZSTD between –2.0 and +2.0, and Point Measure Correlation between 0.40 and 0.85 (Atmoko et al., 2026). Cases exceeding these thresholds were considered misfitting or outlying, indicating irregular response patterns, inattentive answering, or misunderstanding of item content, issues commonly observed among early adolescents due to developmental variability in cognitive and emotional regulation. After screening, 313 responses met the criteria and were retained for analysis (87 males, 216 females; mean age = 15.18). The exclusion of a substantial proportion of responses is acknowledged as a limitation that may affect generalizability. In addition, given the participants’ age, reported transgressions were likely minor (e.g., peer conflicts, exclusion, teasing) rather than severe wrongdoing, and the study did not categorise offences by type or severity.

Data analysis and statistical analysis were conducted through the Rasch model, an item response theory approach that simultaneously estimates item difficulty and person ability, thereby ranking items from easiest to most challenging. Analyses were performed using Winsteps version 5.1.5 (Ifdil, Bariyyah, et al., 2024), enabling rigorous assessment of the instrument’s validity and reliability through response-pattern diagnostics. The resulting Rasch outputs provide robust evidence for the EFI’s measurement quality within this sample. Ethical approval was obtained from the Indonesian Counsellor Association in Jakarta, Indonesia (No. 45465/EC/IKI/III/2025). Psychometric evaluation employed the Rasch model (Andrianie et al., 2025; Ariyanto et al., 2020). Winsteps v5.1.5 was used to estimate item difficulty and person ability and to evaluate measurement quality through fit, reliability, and response pattern diagnostics (Linacre & Wright, 2000).

RESULT AND DISCUSSION

Result

Measurement objectivity and Rasch fit

Assessment of religious forgiveness began by evaluating item and person fit against the ideal mean-square (MNSQ) outfit range of 0.50–1.50 logits (Ifdil et al., 2024). Across the 69 items of the EFI, the mean outfit statistic was 0.99 logits, indicating that the items functioned exceptionally well for measurement purposes. Of the 615 students who initially responded, only 303 met the fit criteria and were therefore retained for further analysis; these respondents constituted an analytically sound sample.

Table 2 Descriptive statistics for person and item measures (I=69, N =303)

	Reliability	Separation index	Mean measure*)	Cronbach’s alpha	Raw explained by measures**)
Person	0.83	2.22	-0.11	0.84	47.5%
Item	0.99	12.11	0.00		

*) Logit Scale Measurement.

**) Calculated using Principal Component Analysis (PCA)

Rasch outputs for the EFI (Table 2) show a person reliability index of 0.83, demonstrating substantial consistency across respondents, and an item reliability index of 0.99, reflecting outstanding stability in item performance. In addition, Cronbach’s alpha was 0.84, further corroborating the scale’s reliability. Although item reliability and Cronbach’s alpha coefficients indicated satisfactory internal consistency, reliability alone does not establish construct validity (Ariyanto et al., 2026). To ensure the instrument’s structural soundness, additional Rasch-based diagnostics were performed. All items exhibited acceptable fit indices (Infit and Outfit MNSQ= 0.50–1.50; ZSTD = –2.0 to +2.0) and positive point measure correlations (0.41–0.82), demonstrating coherent item polarity [1,2]. The principal components analysis of standardised

residuals further revealed that the raw variance explained by measures exceeded 40%, confirming the unidimensionality of the construct. Taken together, these results provide strong evidence for the instrument's psychometric robustness and internal structural validity

Threshold: partial credit model

A scale that is clearly written and free of ambiguity enables respondents to select the most appropriate answer with confidence. To achieve this clarity, each response category must be presented unambiguously and in language readily understood by the target population. The present study employed a six-point Likert scale, summarised in Table 3.

Table 3 Item threshold and fit indices of response format (I=69, N =303)

Category	Score	Andrich Threshold	Observed Average	Observed Count (%)	Infit MNSQ	Outfit MNSQ
Strongly disagree	1	NONE	-1.12	16	0.97	0.97
Disagree	2	-.081	-.053	17	1.10	1.10
Somewhat disagree	3	0.89	-.029	5	1.08	1.08
Somewhat agree	4	-2.00	0.04	30	1.06	1.04
Agree	5	0.54	0.467	23	0.88	0.91

Table 3 confirms that the EFI response categories were comprehensible to participants and did not elicit confusion. The monotonic increase in both means supports this conclusion, as observed logits and Andrich thresholds rise steadily from the lowest category (NONE) to a maximum of +1.38 logits.

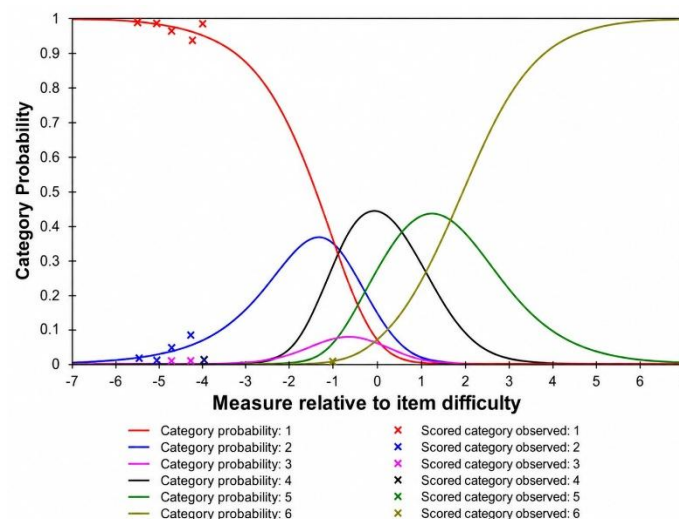


Figure 1 Probability and empirical categorical curves of EFI

Figure 1 displays the category probability curves for the EFI. Each of the six response options (labelled 1 through 6) forms a distinct bell-shaped curve with a single peak, indicating that respondents consistently chose the intended category when their underlying level of forgiveness fell within the corresponding logit range. According to Rasch guidelines, such hill-shaped curves demonstrate that the response points are readily interpretable by the sample.

Gender-Based Analysis of Forgiveness in Students

Table 4 shows the item-level analysis, which revealed that Item 3 (“Is the person who hurt you still alive?”) was the most difficult statement to endorse, with a logit value of +4.67. This finding suggests that, within the cognitive and affective domains of forgiveness, the continued presence of an offender can intensify negative memories and emotions, thereby making forgiveness harder to achieve. The difficulty of this item suggests that many respondents had not fully resolved the internal conflict provoked by the offender’s ongoing presence, highlighting it as a critical indicator of the depth and authenticity of the forgiveness process.

Table 4 Student enright forgiveness as measured by item logit (I=69, N =303)

Item	Total Score	Logit	Estimate Model	Infitted MNSQ	Item ZS	Outfit MNSQ	Item ZS	Person Measure
3	30	4.6	0.	0.	0.1	0.8	-0.2	0.
62	9	7	41	99	1	6		12
45	50	1.2	0.	1.	0.7	1.0	0.4	0.
30	9	6	06	08	6	6	8	34
56	60	0.9	0.	0.	-	0.9	-	0.
57	3	7	05	96	0.41	8	0.15	29
38	66	0.8	0.	0.	-	0.9	-	0.
52	9	1	05	94	0.85	1	1.08	4
33	67	0.8	0.	0.	-	1.0	0.5	0.
43	2	0.7	0.	1.	1.3	1.1	2.0	0.
47	4	8	05	1	7	7	4	28
53	69	0.7	0.	0.	-	0.9	-	0.
40	0	6	05	97	0.35	7	0.31	45
20	71	0.7	0.	1.	2.8	1.2	3.4	0.
37	3	1	05	21	3	7	3	19
46	71	0.7	0.	0.	-	0.9	-	0.
12	7	1	05	97	0.46	7	0.41	41
28	72	0.6	0.	0.	-	0.8	-	0.
18	3	9	05	89	1.71	9	1.55	49
26	72	0.6	0.	1.	2.6	1.2	3.0	0.
13	9	8	04	18	3	3	7	22
68	73	0.6	0.	1.	1.0	1.1	1.5	0.
27	1	8	04	07	9	2	9	21
35	74	0.6	0.	0.	-	0.9	-	0.
4	3	5	04	97	0.39	7	0.48	38
50	74	0.6	0.	0.	-	0.9	-	0.
14	7	5	04	98	0.23	5	0.71	45
55	75	0.6	0.	0.	-	0.9	-	0.
10	8	2	04	96	0.67	7	0.49	33
60	75	0.6	0.	0.	-	0.9	-	0.
25	8	2	04	95	0.71	8	0.35	49
5	76	0.6	0.	1.	1.6	1.1	2.0	0.
23	8	1	04	11	5	4	3	25
17	77	0.5	0.	0.	-	0.9	-	0.
32	6	9	04	88	1.94	1	1.42	38
11	78	0.5	0.	1.	2.8	1.2	3.1	0.
49	3	8	04	19	7	2	9	18
21	80	0.5	0.	0.	-	0.9	-	0.
29	6	3	04	93	1.15	6	0.66	
39	81	0.5	0.	0.	-	0.9	-	0.
16	1	2	04	93	1.11	3	1.11	43
42	82	0.4	0.	1.	0.1	1.0	0.4	0.
31	8	9	04	01	7	3	8	25
41	85	0.4	0.	1.	0.7	1.0	0.8	0.
24	8	4	04	04	7	5	7	33
34	88	0.4	0.	0.	-3	0.8	-	0.
15	0		04	84		4	2.81	4
44	88	0.4	0.	0.	-	0.8	-	0.
36	2		04	85	2.78	7	2.26	41
19	88	0.3	0.	1.	2.5	1.1	2.6	0.
48	5	9	04	15	3	7	8	36
22	89	0.3	0.	1.	3.2	1.1	2.9	0.
38	2	8	04	2	3	8	3	31
1	90	0.3	0.	0.	-	0.7	-	0.
61	9	5	04	78	0.47	8	0.96	33

It em	T otal Score	Lo git	S .E Model	I nfit MNSQ	ZS TD	Ou tfit MNSQ	ZS TD	P t. Measur e Corr
6	92	0.3	0.	0.	-	0.8	-	0.
16	4	2	04	89	1.96	9	1.84	28
24	93	0.3	0.	0.	-	0.9	-	0.
1	2	1	04	96	0.77	6	0.67	32
17	94	0.2	0.	1.	2.6	1.1	2.7	0.
59	1	9	04	16	-	0.8	-2.8	-
67	96	0.2	0.	0.	4.29	4	-	0.04
5	3	4	04	77	-	0.9	-	0.
49	10	0.1	0.	0.	0.66	6	0.58	39
48	20	5	04	96	0.5	1.0	0.5	0.
44	10	0.0	0.	1.	5	3	1	24
66	73	6	04	03	3.3	1.2	3.1	0.
51	10	0.0	0.	1.	-	1	-	0.
25	77	5	04	23	-0.3	3	6	31
8	11	-	0.	0.	0.6	1.0	0.6	0.
32	29	0.05	04	98	2	5	3	27
2	12	-	0.	1.	-	0.8	-	0.
55	03	0.2	05	05	1.36	8	1.41	32
10	12	-	0.	0.	2.0	1.1	2.0	0.
34	36	0.28	05	89	9	9	8	25
19	12	0.3	05	19	2.7	1.2	2.6	0.
7	57	0.33	05	25	1	5	6	21
42	12	-	0.	1.	1.0	1.0	1.0	0.
60	59	0.33	05	09	6	9	2	32
11	12	-	0.	1.	-	1.0	1	0.
31	90	0.41	05	04	0.42	9	-	0.
16	12	-	0.	0.	0.71	3	0.71	44
54	99	0.43	05	93	-	1.0	0.1	0.
23	13	-	0.	0.	0.42	1	8	34
47	04	0.44	05	96	2.8	1.2	2.6	0.
3	13	-	0.	1.	1	7	1	23
63	13	0.47	05	22	0.6	1.1	1.1	0.
22	13	-	0.	1.	8	4	-	0.
9	18	0.48	05	06	2.7	1.7	-	0.
40	13	0.54	05	76	1	8	2.42	33
50	13	-	0.	1.	1.5	1.2	1.9	0.
37	43	0.55	05	16	4	3	1.1	0.
69	13	-	0.	1.	0.2	1.0	4	46
27	47	0.56	05	02	-	0.8	-	0.
13	13	0.66	06	91	0.93	9	1.07	4
74	13	-	0.	0.	-	0.8	-	0.
82	82	0.67	06	82	1.88	3	1.76	3
39	13	-	0.	0.	-	0.8	-1.5	0.
66	85	0.68	06	87	1.36	5	-	0.
15	13	-	0.	1.	1.3	1.1	1.3	0.
71	88	0.69	06	14	1	4	8	23
53	13	-	0.	0.	-	0.9	-	0.
85	90	0.7	06	94	0.58	6	0.39	31
20	13	-	0.	0.	-	0.9	-	0.
77	91	0.7	06	93	0.63	5	0.47	35
45	14	-	0.	1.	0.3	0.9	-	0.
91	04	0.75	06	03	2	9	0.03	35
35	14	-	0.	0.	-	0.9	-	0.
88	06	0.75	06	93	0.71	4	0.59	24

Item	Total Score	Logit	SE Model	Infit MNSQ	ZSTD	Outfit MNSQ	ZSTD	Pt. Measure Corr.
21	14	-	0.	0.	-	0.8	-	0.
65	14	0.83	06	83	1.67	1	1.98	44
69	14	-	0.	1.	1.0	1.1	1.1	0.
15	14	0.86	06	11	5	2	7	11
58	14	-	0.	1.	1.0	1.1	1.1	0.
58	14	0.86	06	11	5	2	7	11
29	14	-	0.	0.	-	0.9	-	0.
39	14	0.94	06	91	0.91		0.99	31
36	14	-	0.	1.	2.8	1.3	2.8	0.
41	14	0.95	06	32	4	1	6	18
61	14	-	0.	0.	-	0.7	-	0.
63	14	0.95	06	7	3.23	2	3.12	26
64	14	-	0.	1.	2.4	1.2	2.4	0.
64	14	1.02	06	26	2	6	6	14
64	14	-	0.	0.	-	0.9	-	0.
64	14	1.05	07	9	1.02	1	0.95	26
64	14	-	0.	0.	-	0.8	-	0.
64	14	1.08	07	86	1.46	9	1.08	22
64	14	-	0.	1.	0.7	1.0	0.8	0.
64	14	1.08	07	07	4	8	5	2
64	15	-	0.	0.	-	0.9	-	0.
64	15	1.27	07	95	0.54	7	0.35	21
64	15	-	0.	0.	-	0.8	-	0.
64	15	1.33	07	88	1.28	9	1.17	19

Conversely, Item 64 (“My feelings were never hurt”) recorded the lowest difficulty (-1.33 logits), making it the easiest item for participants to endorse. This pattern implies that the affective dimension of forgiveness (particularly the reduction of painful emotions) was relatively well developed in the sample. Strong agreement with this item signals participants’ success in managing emotional wounds and attaining a more stable, forgiving state. All 69 items satisfied the acceptable Rasch model–fit criteria (Infit/Outfit MNSQ = 0.50–1.50; ZSTD= -2 to +2), indicating coherent and stable item functioning across the scale (Ifdil et al., 2022; Rizka et al., 2026). Item and person reliability were high (item reliability = 0.99; person reliability = 0.83), supporting the precision and stability of the measurement structure. Items 3 and 64 are discussed as illustrative anchors within the item hierarchy representing, respectively, the most difficult and the easiest items to endorse, thereby demonstrating the construct continuum effectively captured by the inventory. For clarity, Table 4 summarises the five most difficult and five easiest items, exemplifying the scale’s coverage across the latent trait continuum.

Table 5. The summary of person measure (I=69, N =303)

Person Entry Number	Total Score	Measure	Model S. E	Infit MNSQ	ZSTD	Outfit MNSQ	ZTSD	Pt. Measure Corr.
Top five responses								
8 F	325	0.85	0.13	1.64	2.66	1.38	1.75	0.31
9 F	323	0.82	0.12	1.14	0.73	1.23	1.14	0.55
23 M	315	0.70	0.12	1.35	1.70	1.37	1.75	0.67
166 F	315	0.70	0.12	0.92	-0.36	1.24	1.18	0.61
124 M	311	0.64	0.12	1.19	1.00	0.86	-0.70	0.47
Bottom five responses								
358 M	180	-0.81	0.11	0.98	-0.05	1.03	0.19	0.54
360 M	189	-0.71	0.11	1.26	1.43	1.52	1.91	0.44
60 F	189	-0.71	0.11	1.22	1.21	1.42	1.58	0.47
343 M	191	-0.68	0.11	1.37	1.95	1.54	1.97	0.34
465 F	195	-0.64	0.10	0.58	-2.76	0.59	-1.92	0.74

Table 5 presents the five highest and five lowest person measures among the 303 *santri* retained for analysis. The respondent with the highest measure was participant 8F, a 13-year-old female from East Java, who achieved a person measure of +0.82 logits, reflecting the most pronounced forgiving disposition in the dataset. At the other extreme, participant 358M, a 14-year-old male from Central Java, registered the lowest person measure (-0.82 logits). These contrasting profiles underscore the scale's capacity to differentiate meaningfully between individuals with high and low forgiveness propensities; female *santri* demonstrated higher forgiveness scores than males, reflecting a consistent gender-related pattern across the sample. This result is consistent with recent evidence that women tend to show greater empathy and relational concern when forgiving interpersonal offences. Survey data show that most respondents maintain a high frequency of obligatory and supererogatory prayers. Specifically, 243 *santri* (80.20%) reported always performing their daily prayers and additional sunnah prayers, while 47 *santri* (16.0%) reported praying three to four times per day. Only 13 *santri* (4.29 %) indicated an irregular pattern of one to two prayers per day. Such adherence underscores the centrality of prayer in *pesantren* life and suggests that sustained ritual practice may strengthen spiritual values relevant to the development of a forgiving disposition. Qur'an memorisation levels varied across the sample. Fifty-eight respondents (19.14 %) were classified as advanced memorisers, having committed substantial portions of the Qur'an to memory. The majority, 171 students (56.44 %), were at a basic level, recalling only shorter sūrahs or selected juz', whereas 74 *santri* (24.42 %) reported no memorisation.

Survey data on students' participation in social activities revealed that 127 respondents (41.91%) reported only rare involvement, while 111 *santri* (36.63%) engaged occasionally. By contrast, 33 students (10.8%) stated that they were very frequently involved, whereas 30 *santri* (9.90%) indicated that they never took part in any social activity. Such limited engagement may constrain the development of *santri*'s socio-emotional competencies, including their ability to forgive. Participation in character-building initiatives also varied. A total of 101 *santri* (33.44 %) reported regularly attending such training, 88 (26.82 %) had participated several times, and 81 (27.30 %) had taken part only once or twice; 32 students (10.65 %) had never engaged in any character-building programme.

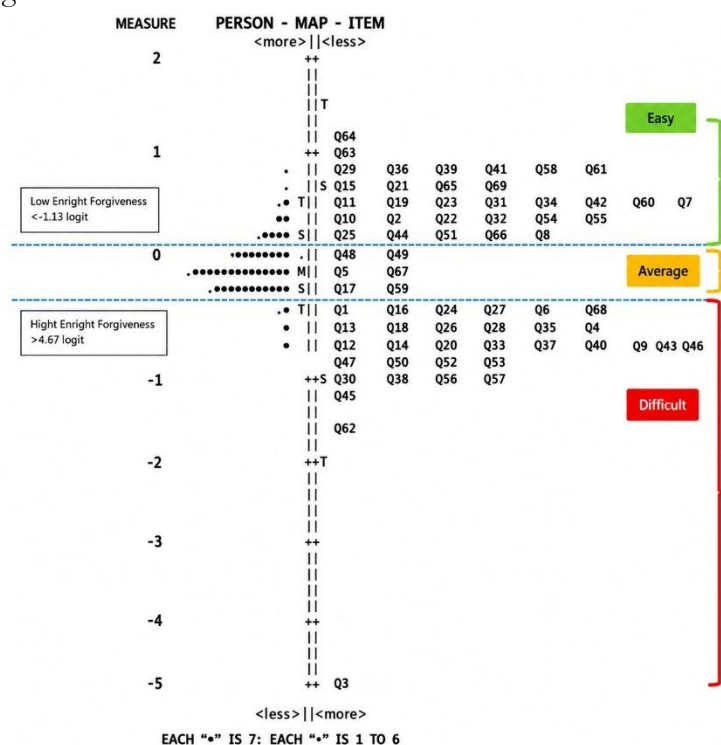


Figure 2 Probability and empirical categorical curves of EFI.

The figure presents the distribution of item difficulties and person abilities derived from the Rasch analysis of the EFI instrument ($n = 303$). Item difficulty estimates are arranged from highest (most difficult) to lowest (least difficult), while person ability estimates range from highest to lowest ability levels. The metrics include the mean (M), one standard deviation (S), and two standard deviations (I) for both persons and items, providing insight into the data's central tendency and spread. The values are expressed in logits, which represent the underlying latent trait measured by the instrument. Symbols such as “#” denote clusters of seven respondents, and “.” denotes groups of one to six respondents, facilitating visualisation of respondent distribution across the ability continuum. This structured representation enables direct comparison between item challenges and respondent competencies within the same measurement scale. This pattern is also evident in the Wright Map (Figure 2), which depicts the distribution of respondent ability and item difficulty on the same logit scale. Once item parameters were estimated, the Wright Map served to position respondents' abilities and item challenges along the Rasch “ruler,” allowing direct comparison at equivalent logit values

Discussion

Forgiveness is a key concept in psychology that contributes to both social relationships and individual well-being. The research shows that female santri are, on average, more forgiving than male santri. However, one should be careful not to interpret this gender gap as women's characteristics, given that such differences are often context-specific rather than universal. According to psychological research, females tend to show greater empathy and be more attuned to relationships, qualities that enable forgiveness. At the same time, men forgive primarily as an act of self-control and are less likely to forgive unconditionally. (Bariyyah, Soejanto, et al., 2025; Záhorcová et al., 2023). Within the socio-religious culture of Indonesian Muslims, females are generally taught to practice *ṣabr* (patience), control their emotions, and keep social harmony (Ahmad Hasan Ridwan et al., 2022). The comprehension of this pattern must acknowledge that adolescent adjustment might be linked to digital behaviour and that mental-health issues vary significantly in terms of the cognitives as well as the biologies involved. (Saputra, Setyorini, Aminah, et al., 2024; Saputra, Setyorini, Ramadhani, et al., 2024). Higher forgiveness scores among female santri might be influenced by factors unrelated to gender. This gender pattern in forgiveness is a finding specific to the pesantren involved in the study. However, this study did not examine socio-cultural norms, institutional culture practices, and leadership styles (ASSA'IDI, 2021; Setiawan et al., 2026). As a result, the findings do not directly show that these factors have caused the observed differences. Nonetheless, from the perspective of Islamic education management, the results could indicate whether these programs have taken into account the distinct social and emotional demands of male and female santri. This caution is consistent with broader evidence that psychological outcomes are embedded in contextual systems such as parenting processes, and the burdens experienced by families in demanding care contexts (Maizura et al., 2025).

Participation in religious activities that are part of the daily habits of the *pesantren* community, such as congregational prayers, reading the Qur'an, and *dhikr*, was also connected with a higher level of forgiving. In *pesantren*, these activities are a controlled part of religious education that help develop qualities such as self-control, reflection, and empathy, which aligns with findings from a study showing that spirituality is related to stable emotions and good social behaviour (Najib et al., 2026). Moreover, involvement in the community encourages the adoption of forgiving values and the strengthening of psychosocial health. Studies on mental health have shown that mindfulness-based stress reduction, illness validation strategies, and transdiagnostic treatment can help people control their emotions and feel psychologically healthy and whole again (Ramadhani et al., 2025). The results of this research suggest that forgiving a fellow santri should be seen not only as a personal psychological characteristic but also as an impact of Islamic educational management in *pesantren*. The observed higher level of forgiveness among female

students reflects gender-specific character development and is most likely influenced by institutional norms, leadership style, and daily educational routines (Rosa & Clavero, 2022). From a management standpoint, these distinct gender differences indicate that the character education programs are not operating in a social vacuum. They are, in fact, intertwined with the students' gendered socialisation, norms of emotional expression, and the expectations that are part of the institutional culture of *pesantren* (Apriyana et al., 2026; Fatah et al., 2025; Hermawan, 2025b; Humaidy et al., 2025; Muafiah et al., 2024). As a result, *pesantren* leaders and teachers have to take into account gender responsiveness as a part of their strategies for character education management so that both male and female students get the support they need in developing emotional maturity and gaining skills for resolving conflicts constructively (Ariyanto et al., 2020; Nasution et al., 2025).

Religious rituals such as group prayers, the memorisation of the Qur'an, and halaqah circles can be considered components of religious education that are managed rather than simply traditional practices. These exercises are systematically arranged, overseen, and evaluated in *pesantren*, thus serving as institutional instruments for the internalisation of moral values. Forgiveness, in turn, can be considered one of the quantifiable outcomes of a broader system of moral and character education management. Likewise, students' involvement in social life and activities designed for character development should be treated as part of both institutional governance and the student development management system. The process by which these programs are conceived, implemented, and integrated into the daily routine of school life reflects managerial decisions that influence students' socio-emotional skills and abilities. Based on the information currently available, it can be argued that improving the management of such programs will yield more consistent and fair character education outcomes. An important point to note is that, through the use of Rasch analysis in this work, the potential of data-driven methods to characterise the evaluation of character education in Islamic educational institutions has been acknowledged. By furnishing *pesantren* leaders and policymakers with precise and comparable indicators of students' forgiving spirit, the evidence produced becomes a very useful instrument for them to use when revising the program outline, allocating resources, and developing more finely targeted intervention plans. Thus, this research highlights the relevance of measurement-based evaluation as an integral component of Islamic education management, particularly in understanding and assessing character development.

CONCLUSION

This study provides three main findings. First, the Indonesian version of the Enright Forgiveness Inventory demonstrated satisfactory measurement quality, with person reliability of 0.83, item reliability of 0.99, Cronbach's alpha of 0.84, and a person separation index of 2.22. The Rasch measures explained 47.5% of the raw variance. Second, item difficulty ranged from +4.67 logits for the most difficult item to -1.33 logits for the easiest item, indicating that the instrument measured different levels of forgiveness among santri. Third, the descriptive person measures indicated that female santri tended to have higher levels of forgiveness than male santri. However, this gender-related pattern should be interpreted with caution because the study did not examine the influence of socio-cultural, institutional, or leadership factors. These findings indicate that Rasch-based measurement can provide useful evidence for evaluating forgiveness as a character education outcome and for developing gender-responsive character education programs in *pesantren*.

Religious routines, character-building activities, and social participation in *pesantren* serve as structured educational programs that systematically cultivate students' moral and emotional development. Therefore, *pesantren* leaders are encouraged to adopt evidence-based, gender-sensitive strategies for managing character education, including the use of psychometric data to monitor and improve program effectiveness. By positioning forgiveness as a measurable outcome of institutional

practice, this study contributes to the discourse on Islamic education management. It underscores the role of leadership, governance, and evaluation in strengthening character building in *pesantren*.

This study contributes to the theoretical level by considering forgiveness as a measurable educational outcome shaped by Islamic education management rather than by a person's psychological characteristics. This view opens new avenues for research by connecting the evaluation of character education in schools with psychometric methods. Nevertheless, this work is not without limitations. The study was conducted only among *pesantren* in Java, which makes it difficult to generalise the findings across different cultural contexts. Moreover, factors such as socio-cultural background, level of religious involvement, or the intensity of interpersonal experiences, which may have an impact, were not included in the statistical control. Future studies may want to examine these elements, use more diverse samples, and employ longitudinal or experimental designs to gain deeper insights into the process of forgiveness in educational environments.

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