

THE RELATIONSHIP BETWEEN FATHER ATTACHMENT AND EMOTIONAL WELL-BEING AMONG DAUGHTERS IN INDONESIA: A CROSS-SECTIONAL STUDY

Hubungan Antara Father Attachment Dan Emotional Well-Being Pada Anak Perempuan Di Indonesia: Studi Cross-Sectional

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ABSTRACT

Background: In recent decades, emotional mental disorders have been increasingly reported among students, affecting their emotional well-being; within a hedonic framework, low emotional well-being is marked by high negative affect, low positive affect, and minimal life satisfaction, yet father attachment, a key protective factor, remains understudied in this population. **Purpose:** This study examined the relationship between father attachment and emotional well-being among students. **Methods:** Participants were 390 students aged 18–24 from four universities in Banda Aceh, selected through multistage cluster sampling followed by disproportionate stratified random sampling. Father attachment was measured using the Inventory of Parent and Peer Attachment-Revised (IPPA-R) Father Attachment subscale, and emotional well-being was measured using the Scale of Positive and Negative Experience (SPANE), comprising positive affect (SPANE-P) and negative affect (SPANE-N). Data was analyzed using Pearson Product-Moment Correlation. **Results:** Father attachment was positively correlated with positive affect ($r = 0.415$, $p < 0.05$) and negatively correlated with negative affect ($r = -0.255$, $p < 0.05$). **Conclusion:** Father attachment is associated with both positive and negative affect among students, suggesting that family-based prevention initiatives involving fathers may help improve students' mental health.

Keywords: emotional well-being, father attachment, students, gender

ABSTRAK

Latar Belakang: Gangguan mental emosional dalam beberapa dekade terakhir banyak ditemukan pada anak perempuan sehingga memengaruhi emotional well-being mereka. Dalam kerangka hedonic, emotional well-being yang rendah ditandai dengan afek negatif tinggi, afek positif rendah, dan kepuasan hidup yang minim, sementara father attachment sebagai faktor protektif masih kurang diteliti pada kelompok ini. **Tujuan:** Penelitian ini bertujuan untuk menguji hubungan antara father attachment dan emotional well-being pada anak perempuan. **Metode:** Partisipan adalah 390 mahasiswi berusia 18-24 tahun dari empat perguruan tinggi di Banda Aceh, yang dipilih melalui multistage cluster sampling dan dilanjutkan dengan disproportionate stratified random sampling. Father attachment diukur menggunakan subskala Father Attachment dari IPPA-R, dan emotional well-being diukur menggunakan SPANE yang terdiri dari afek positif (SPANE-P) dan afek negatif (SPANE-N). Data dianalisis menggunakan teknik Pearson Product-Moment Correlation. **Hasil:** Father attachment berkorelasi positif dengan afek positif ($r = 0,415$, $p < 0,05$) dan berkorelasi negatif dengan afek negatif ($r = -0,255$, $p < 0,05$). **Kesimpulan:** Father attachment berhubungan dengan afek positif maupun afek negatif anak perempuan, sehingga inisiatif pencegahan berbasis keluarga yang melibatkan ayah berpotensi meningkatkan kesehatan mental anak perempuan.

Kata Kunci: emotional well-being, father attachment, anak perempuan, gender

INTRODUCTION

According to data from the Indonesian Health Survey (Kementerian Kesehatan Republik Indonesia, 2023) 2.8% of people aged 15 to 24 reported having mental health problems. This suggests that mental health problems are more common in this young adult group than in middle and late adulthood. Fathers play a crucial role in Indonesia's culturally strong family structure. However, there is still a dearth of research on father attachment, especially in locations like Banda Aceh, which may be disregarding a crucial protective factor against such youth mental health issues.

In the Basic Health Research Survey (Kementrian Kesehatan Indonesia, 2018) mental health problems were categorized as emotional mental disorders, which include depression and anxiety. According to the American Psychological Association (2022), anxiety disorders and depression are more common in women than in men. This difference is largely attributed to the interaction of biological, psychosocial, and cultural factors. Furthermore, traumatic experiences such as sexual harassment or sexual violence, which are more frequently experienced by women, constitute significant risk factors that contribute to poorer mental health outcomes among students (World Health Organization, 2021).

Depression, anxiety, and neuroticism are conceptualized as components of negative affect (Diener, 2009). When negative affect dominates emotional experiences, people may suffer from a variety of psychological and physical repercussions. These include an increased risk of mood disorders, a diminished ability to manage stress, and a general decline in quality of life (Ryff & Singer, 2006). Poor interpersonal connections, challenges in reaching personal objectives, and heightened susceptibility to physical sickness due to compromised

immunological functioning are all consequences of persistent negative emotion (Trompetter *et al.*, 2017).

Conversely, the predominance of positive affect—over negative affect—enables effective emotion regulation, resilience amid challenges, and protection against mental/physical illness, reflecting higher emotional well-being (Diener *et al.*, 1999; Trompetter *et al.*, 2017). This is particularly vital for young adults adapting to demanding environments (Mónaco *et al.*, 2019). Consistent with attachment theory, this study targets positive/negative affect (SPANE) rather than broader well-being dimensions, as father attachment most directly regulates emotional reactivity—the key risk factor for anxiety/depression in students.

Anxiety, depression, and physical complaints are frequent symptoms of internalizing disorders (American Psychiatric Association, 2022). Previous studies have reported that internalizing problems have increased among adolescents, particularly among female adolescents in recent years (Mojtabai *et al.*, 2016; Clinchard *et al.*, 2024). According to research, the quality of interpersonal interactions, particularly relationships with parents and peers, influences internalizing problems among students (Bosacki *et al.*, 2007; Huang *et al.*, 2022; Yang *et al.*, 2022 in Florean *et al.*, 2024), and continued changes in the quality of these relationships across emerging adulthood remain linked to social and emotional functioning (Holt *et al.*, 2018).

Bowlby's (1969) attachment theory states that early attachment ties with parents build an individual's internal working models, which influence how they perceive themselves, others, and the social world. When students have safe and supportive attachment ties with their parents, they are more likely to build positive internal working

models. These positive mental representations aid girls in developing healthy interpersonal relationships later in life and help them interpret social situations more positively. According to Baytemir (2016), people who have a secure attachment style typically view themselves as valued, self-assured, and capable of creating strong social support networks. Positive and supportive relationships within the social environment are essential for maintaining psychological well-being (Seligman, 2004). Similarly, Sagone *et al.* (2023) emphasized that close and supportive interpersonal relationships are fundamental contributors to emotional well-being. Furthermore, Keizer *et al.* (2019) observed that changes in the perceived quality of father-child attachment were substantially related to changes in self-esteem among students, but not among sons. Attachment to fathers lessens psychological and emotional vulnerability in girls transitioning from adolescence to early adulthood, with multiple studies consistently demonstrating better outcomes compared to peers lacking strong paternal ties (Zhou *et al.*, 2024; Stern *et al.*, 2024). Nevertheless, this relationship is likely mediated by variables such as self-esteem and coping strategies (Kostromina *et al.*, 2016) and moderated by cultural factors.

Research consistently links secure attachment with improved emotional well-being, stress resistance, and social competence (Kaasbøll *et al.*, 2021; Morgan *et al.*, 2020; Méndez-Méndez *et al.*, 2021). Insecure attachment, on the other hand, has been linked to lower emotional well-being and a variety of negative outcomes, including increased anxiety, sadness, and behavioral issues (McGinley *et al.*, 2023; Gibson *et al.*, 2018; Furlong *et al.*, 2021). In Indonesia, particularly among students in Banda Aceh—who come from a strong Acehnese cultural background with Islamic values that place special emphasis on the role of the father—

no research has specifically explored the relationship between father attachment and emotional well-being.

Recent studies have advanced understanding of the father-daughter bond: Zhou *et al.* (2024) found that father presence was positively related to resilience among Chinese adolescent students, mediated by psychological security, while Stern *et al.* (2024) demonstrated that fathers' relatedness and autonomy support predicted attachment security from adolescence into adulthood. In Indonesia, Sarfika *et al.* (2023) reported that parental attachment was associated with adolescents' emotional and behavioral problems and self-esteem. Still, they did not isolate father attachment or examine positive and negative affect as distinct outcomes. Taken together, this body of work establishes that father-child bonds shape psychological outcomes, yet it has largely been conducted in Western or East Asian samples and has rarely disaggregated emotional well-being into its positive and negative affective components. The present study addresses this gap by examining both SPANE-P and SPANE-N as separate outcomes of father attachment among students in Aceh, a culturally distinct Indonesian context in which paternal roles are shaped by strong Islamic and Acehnese family values, thereby extending the state of the art on father attachment to a population not previously studied in this respect.

The current study aims to investigate the association between father attachment and emotional well-being among students in Banda Aceh, a city in Indonesia strongly influenced by Acehnese Islamic culture and law, in which the province formally implements syariah (Islamic law) and paternal roles are shaped accordingly. It is expected that father attachment is significantly connected with both the positive

and negative affect components of students' emotional well-being.

METHOD

Study Design, Time, and Location

This study used a cross-sectional correlational design to examine the association between father attachment and emotional well-being among students, with all variables measured at a single point in time. This survey employed probability sampling through a two-stage procedure. First, multistage cluster sampling was used to determine the study locations. In Stage 1, two of the nine subdistricts in Banda Aceh were randomly selected. In Stage 2, two universities within each selected subdistrict were randomly selected, yielding a total of four universities. Second, disproportionate stratified random sampling was applied within these four universities, which were treated as strata, to allocate the number of participants per institution given their unequal population sizes.

Inclusion criteria were:

- 1) students aged 18–24 years.
- 2) currently enrolled in a public or private university in Banda Aceh.
- 3) living with both biological parents since childhood, with both parents alive at the time of data collection.

Exclusion criteria were participants who did not meet all inclusion criteria, including those raised in single-parent households, those who had not lived with both parents since childhood, or those whose father or mother had passed away.

Population

The study's population was made up of female university students aged 18 to 24 who were enrolled in public and private universities in Banda Aceh. This age range represents individuals who are in the early

adulthood developmental stage, which is characterized by important transitions in emotional and interpersonal development. Participants were enrolled across three levels of the Indonesian higher education system: D III (Diploma III), a three-year applied/vocational programme; D IV (Diploma IV), a four-year applied programme equivalent in duration to an undergraduate degree; and S1 (Strata 1), the standard four-year undergraduate (bachelor's) degree.

Sample

There were 390 participants in the final sample. The Isaac and Michael (1995) sample size table with a 95% confidence level and a 5% margin of error indicated that at least 349 individuals were required. 411 persons initially responded to the survey. However, 21 participants were removed before data analysis because they did not fit the inclusion criteria, such as not living with both parents since childhood and not having both parents alive. As a result, 390 eligible subjects were included in the final dataset. The results may not be typical of students from single-parent households or those who did not grow up living with both parents because this criterion restricts the findings' applicability to students from intact homes.

Selection of Research Respondents (Sampling)

This study employed probability sampling combining multistage cluster sampling and disproportionate stratified random sampling, applied in two stages.

- 1) Multistage Cluster sampling: two of the nine subdistricts in Banda Aceh were randomly selected as the primary clusters, namely Syiah Kuala and Lueng Bata. Within each selected subdistrict, two public or private universities were randomly selected as secondary clusters, yielding four universities in total:

Universitas Syiah Kuala, Universitas Islam Negeri Ar-Raniry, Universitas Muhammadiyah Aceh, and Universitas Serambi Mekkah.

- 2) Disproportionate stratified random sampling: the four selected universities were treated as strata. This technique was applied because the student population across universities was unequal in size, with some institutions having disproportionately small or large numbers of students and was intended to ensure adequate representation of each stratum rather than domination by the largest institution.

Data Collection

Data collection was carried out during campus visits from March 6–13, 2025. Selected participants were approached directly in libraries, classrooms, and other campus areas for offline data collection, with data validity maintained through the on-site supervision and screening procedures described below. At the same time, those who could not be reached in person were invited to complete the survey through an online Google Forms link distributed via university WhatsApp groups. To ensure data validity, the research team supervised questionnaire completion on-site and checked each response for completeness before acceptance. All returned questionnaires, both offline and online, were subsequently screened during data cleaning to identify duplicate submissions and patterned or inconsistent responses. Only responses that met the inclusion criteria and passed this screening process were retained for the final analysis.

Research Variables and Their Limits

Father attachment was the independent variable in this study, and emotional well-being was the dependent variable. Father attachment refers to the emotional link that exists between students

and their fathers, as evidenced by trust, communication, and alienation in the father-daughter relationship. Father attachment was restricted to how students perceived their relationship with their fathers in this study. This variable was examined using Armsden and Greenberg's Inventory of Parent and Peer Attachment-Revised (IPPA-R) (Armsden & Greenberg, 1987). A five-point Likert scale was used to gauge responses, and the alienation dimension's items were scored in reverse. Higher overall scores indicate stronger levels of paternal attachment.

Emotional well-being is defined as an individual's overall emotional state, reflected in the balance between pleasant and negative emotional experiences. In this study, emotional well-being was operationalized as individuals' self-reported emotional experiences over the previous four weeks. The Scale of Positive and Negative Experience (SPANE), developed by Diener (2009), was used to measure this variable. The instrument consists of 12 items answered on a five-point Likert scale, ranging from very rarely or never to very often or usually. Higher positive affect scores indicate higher emotional well-being, whereas lower emotional well-being is indicated by higher negative affect scores. It should be noted that, in this study, emotional well-being is measured only through affective experience and does not include broader components such as life satisfaction or psychological functioning.

Instruments of Data Collection

The study used two validated instruments: the Inventory of Parent and Peer Attachment-Revised (IPPA-R) and the Scale of Positive and Negative Experience (SPANE). The IPPA-R consists of 25 items answered on a five-point Likert scale, with items in the alienation dimension reverse-scored; higher overall scores indicate stronger father attachment. The IPPA-R

measures father attachment through three dimensions—trust, communication, and alienation—using a 5-point Likert scale and showed high reliability in this study ($\alpha=0.920$). The SPANE assesses emotional well-being through positive and negative affect, also using a 5-point Likert scale, with good reliability for both subscales ($\alpha = 0.915$ for positive affect and $\alpha = 0.854$ for negative affect).

Data Analysis

Data were evaluated using parametric statistical methods, specifically the Pearson Product-Moment Correlation test, to investigate the association between paternal attachment and emotional well-being. All statistical analyses were carried out with Jeffrey's Amazing Statistics Program (JASP) version 0.19.3.0. Before conducting the correlation analysis, several assumption tests were performed: a normality test using Exploratory Data Analysis (EDA) and a linearity test using scatterplot analysis. However, this simple correlation analysis has several limitations. First, the analysis was conducted using standard Pearson correlation without adjusting for the multistage cluster and stratified sampling design employed in this study; sampling weights, clustering effects, and strata were not incorporated into

the statistical model, which may affect the precision of the estimates and the generalizability of the findings to the broader population. Second, the analysis does not control for potential confounding variables such as age, socioeconomic status, or university type, nor does it account for possible mediators (e.g., self-esteem) or moderators (e.g., cultural and family relationship factors) that may influence the association between paternal attachment and emotional well-being.

Ethical Clearance

This study received ethical approval from the Faculty of Medicine's Health Research Ethics Committee, Universitas Syiah Kuala, under approval number 021/EA/FK/2025. Every participant gave their consent after being made aware of the study's objectives. Participants were also told that their responses would be kept anonymous and confidential, and that the information would be utilized solely for research reasons.

RESULT

Demographic Data

Table 1 displayed the study participants complete demographic data.

Table 1. Demographic Characteristics of Study Participants (N = 390)

Description	Frequency	Percentage (%)
Age		
18 years	68	17,4
19 years	101	25,9
20 years	78	20
21 years	85	21,8
22 years	41	10,5
23 years	14	3,6
24 years	3	0,8
Institution		
Universitas Syiah Kuala	201	51,5
Universitas Islam Negeri Ar-Raniry	92	23,6
Universitas Muhammadiyah Aceh	65	16,7
Universitas Serambi Mekah	32	8,2
Level of Education		
D III	1	0,3
D IV	2	0,6
S1	387	99,1

Continuation of Table 1. Demographic Characteristics of Study Participants (N = 390)

Description	Frequency	Percentage (%)
Year of Enrolment		
2018	1	0,3
2019	3	0,9
2020	18	4,6
2021	73	18,7
2022	80	20,5
2023	84	21,7
2024	130	33,3
Total	390	100

The participants' demographics were shown in Table 1. This survey included a total of 390 students. 19-year-olds made up the biggest percentage of participants (25.9%), followed by 21 years (21.8%), 20 years (20%), 18 years (17.4%), 22 years (10.5%), 23 years (3.6%), and 24 years (0.8%). Most participants were enrolled at Universitas Syiah Kuala (51.5%), and the majority were from the 2024 cohort (33.3%).

Descriptive Statistics

Descriptive analysis was performed on the variables father attachment and emotional well-being to investigate the distribution of group norms and categorize participants' scores as high, moderate, or low. Individual scores within a sample might be interpreted using group norms (Azwar, 2013).

Table 2. Categorization of Father Attachment

Categorization Norm Formula	Category	Frequency	Percentage (%)
$X \geq 91,7$	High	208	53%
$58,3 \leq X < 91,7$	Medium	162	42%
$X < 58,3$	Low	20	5%
Total		390	100%

As shown in Table 2, most participants were categorized as having high father attachment (53%, n = 208), followed

by moderate father attachment (42%, n = 162) and low father attachment (5%, n = 20).

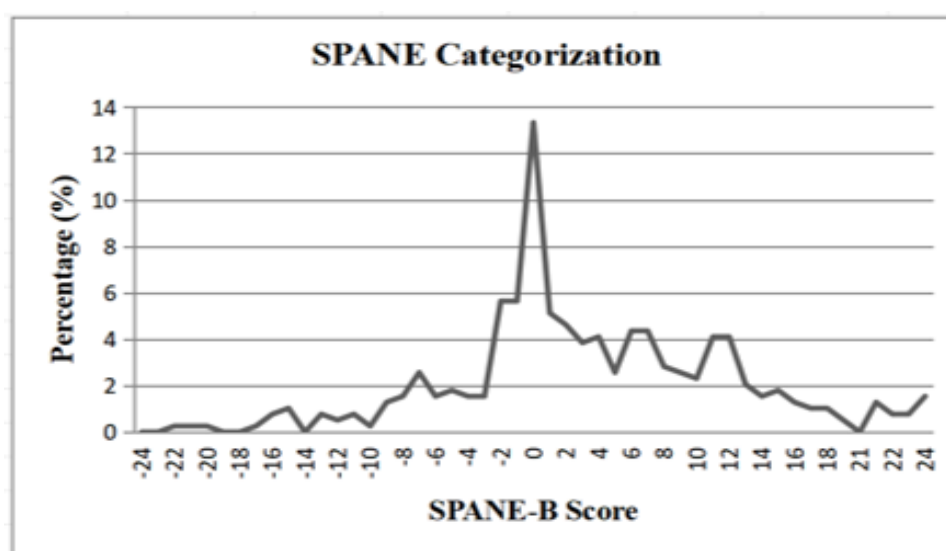


Figure 1. Categorization of Emotional Well-being

Based on the graph above, the distribution of participants appeared to be less concentrated in the negative effect area, more concentrated in the positive effect area, and most concentrated in the central area between negative affect and positive affect.

Table 3. Normality Test Results

Variable	Skewness Value (p)	Description
Father Attachment	-0,505	Normal
Positive Affect Component	-0,179	Normal
Negative Affect Component	0,054	Normal

Under the Exploratory Data Analysis (EDA) criterion, data were considered normally distributed if their skewness and kurtosis values fall between -1.96 and 1.96. Because the skewness values obtained for all three variables in this study (-0.505, -0.179,

Assumption Test

Normality testing in this study was performed using Exploratory Data Analysis (EDA). Table 3 pictured the normalcy test results.

and 0.054) fell within this range, the study's data can be considered normally distributed.

Linearity Test

Linearity between the study variables was examined using a scatterplot analysis. Figure 2 displays the linearity test results.

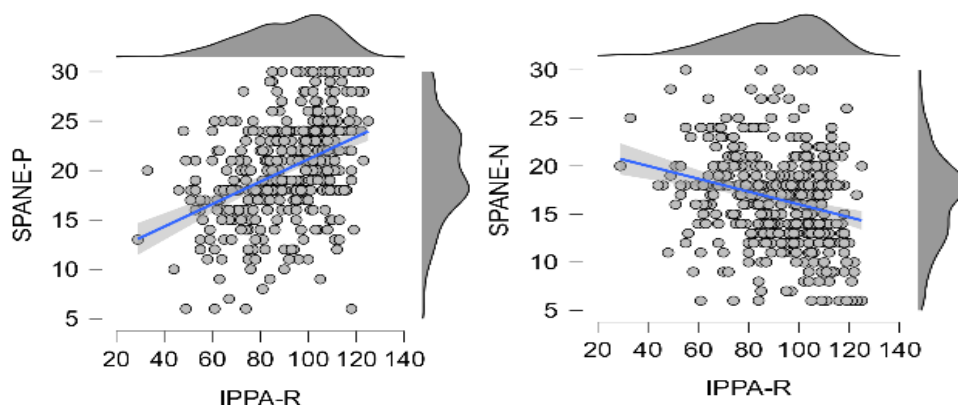


Figure 2. Linearity Test Results

According to the scatterplot, paternal attachment is represented on the X-axis, and emotional health is represented on the Y-axis. The scatterplot for positive affect shows points that tend to move from the bottom left

to the top right, while the scatterplot for negative affect shows points that tend to move from the lower right to the upper left.

Hypothesis Test

Table 4. Results of the Pearson Product-Moment Correlation Test

Statistical Test	Component	Correlation Coefficient (r)	Significance Value (p)	Result
Pearson product-moment correlation	Positive affect	0,415	(p < 0,001)	Supported
	Negative affect	-0,255	(p < 0,001)	Supported

According to the correlation analysis, the positive effect component of emotional well-being is moderately positively correlated with father attachment ($r = 0.415$),

while the negative effect component is weakly negatively correlated with father attachment ($r = -0.255$). Both correlations are statistically significant ($p < 0.05$). In practical

terms, the positive correlation indicates that students who perceive stronger attachment to their fathers tend to report more frequent positive emotions such as joy, contentment, and affection, whereas the negative correlation indicates that stronger father attachment tends to co-occur with less frequent negative emotions such as sadness, fear, and anger. Because the coefficient for positive affect is larger in magnitude than that for negative affect, father attachment appears more strongly associated with promoting positive emotional experiences than with reducing negative ones among students in this sample.

DISCUSSION

This study examined the association between father attachment and students' emotional well-being. According to the correlation analysis results, positive affect has a positive association with father attachment, implying that higher levels of father attachment are connected with higher levels of positive affect among students. Furthermore, negative affect has a negative connection with father attachment, indicating that father attachment is negatively correlated with negative affect among students.

The finding of $r = 0.415$ is consistent with Diener's (2009) theory that emotional well-being is reflected in higher positive affect and lower negative affect, and it also aligns with the findings of Monaco *et al.* (2019) and Malik and Yousaf (2022), who reported that more secure attachment is associated with higher positive affect and lower negative affect.

Students transitioning from late adolescence to early adulthood who have secure attachment relationships with their fathers are less likely to experience psychological and emotional disorders than those who have insecure attachment or no attachment relationship with their fathers

(Zhou *et al.*, 2024; Stern *et al.*, 2024). Fathers who provide a sense of security have been found to be negative predictors of anxiety, meaning that greater paternal support predicts lower levels of anxiety among students (Szudy & Puchalska-Wasyl, 2020). Fathers' sense of security, which is a key component of secure attachment, has also been found to predict the emergence of good emotions in children (Obeldobel & Kerns, 2020).

According to Plopa (2015), inconsistent parenting attitudes are defined by alternating behaviors like forceful and restrictive activities, which further explains the association between paternal parenting attitudes and children's emotional functioning. Children may view the world as chaotic, unpredictable, and unstructured as a result of such inconsistencies. This lack of stability can adversely influence children's self-esteem and raise their susceptibility to anxiety and depression.

Based on Lux *et al.* (2019), father attachment may have a greater impact on children's mental health than mother or peer attachments. For children, mother attachment often provides a secure base where children can seek comfort, whereas father attachment often functions as a trusted companion who supports children's global exploration and sense of self (Newland & Coyl, 2010).

Adult attachment is typically characterized in two dimensions: attachment anxiety and attachment avoidance (Mikulincer *et al.*, 2003). In addition to having a strong desire for intimate relationships, people with high levels of attachment anxiety frequently worry about intimacy and dread rejection. People with high attachment avoidance, on the other hand, frequently have trouble trusting others and prefer independence. According to Chen *et al.* (2017) and Troyer & Greitemeyer (2018), people who have lower levels of

anxiety and avoidance are more likely to develop secure attachment, which is linked to higher self-esteem, stronger ego resilience, better coping skills, and a greater capacity to control negative emotions.

Higher subjective well-being, such as increased life satisfaction, stronger positive affect, and decreased negative affect, is also linked to secure attachment (McGinley *et al.*, 2023; Mittal & Rani, 2022). On the other hand, research has shown a negative correlation between subjective well-being and insecure attachment, which includes attachment anxiety and attachment avoidance (Sagone *et al.*, 2023; Zhang *et al.*, 2016). Although mother and father attachments may serve different functions, the present findings indicate that father attachment is directly related to emotional well-being, thereby supporting the view that paternal attachment is an important contributor to students' psychological adjustment.

Mittal and Rani (2022) stated that university students' subjective well-being was adversely correlated with attachment avoidance and anxiety. In a similar vein, Zhang *et al.* (2016) found a negative correlation between subjective well-being and insecure attachment. Since emotional well-being is one of the essential elements of subjective well-being, people with higher levels of subjective well-being are also thought to have higher levels of emotional well-being (Diener, 2009).

The majority of study participants were classified as having high levels of secure attachment with their fathers based on the descriptive analysis performed on the complete dataset. However, an interesting discovery was made about the distribution of positive and negative impact. The researchers discovered that many participants were not dominated by either happy or negative affect. Instead, a considerable number of participants demonstrated relatively balanced

scores between the two affective components.

In this study, a balance score of zero occurred when both positive and negative affect scores were relatively high. According to Diener *et al.* (1985), individuals may experience strong positive emotions and strong negative emotions at different times rather than simultaneously. A balanced SPANE-B score may therefore reflect how participants recall their emotional experiences, including emotions reported during random moments or residual effects of recent emotional events. Thus, the score indicates a balance in reported emotional experience rather than the simultaneous presence of positive and negative emotions.

These findings can also be interpreted within the socio-religious context of Aceh, the only Indonesian province that formally implements syariah (Islamic law) in family and social life. Within this setting, the father's position is normatively framed around the Islamic concept of qawwamah, in which the father is regarded as the family's protector and provider, a role that encompasses emotional as well as material responsibility (Abubakar *et al.*, 2023). This religious-cultural framing may help explain why father attachment showed a comparatively strong association with students' positive affect in the present sample: in a context where the father is expected to be the primary source of protection and guidance, a secure emotional bond with him may carry particular weight for students' emotional experience. At the same time, prior work on parenting practices in Aceh has observed that fathers' day-to-day involvement in children's emotional caregiving is often more limited than mothers', and that fathers' understanding of their affective role within Islamic teaching is not always well developed in practice (Oxford Policy Management, 2021). Read together with the present results, this suggests

that even the relatively limited emotional engagement Acehnese fathers do provide may be disproportionately consequential for students' emotional well-being, underscoring the potential value of religiously and culturally grounded father-involvement programs, such as those building on existing Islamic parenting education initiatives, for strengthening father-daughter emotional bonds in this setting (Abubakar *et al.*, 2023).

This study has several notable strengths. First, it used a probability-based, two-stage sampling design (multistage cluster sampling followed by disproportionate stratified random sampling) across four universities, which improves the representativeness of the sample relative to convenience-sampled studies common in this field. Second, both instruments demonstrated strong internal consistency in this sample (IPPA-R $\alpha = 0.920$; SPANE-P $\alpha = 0.915$; SPANE-N $\alpha = 0.854$), supporting the reliability of the measurements. Third, by examining positive and negative affect as separate outcomes rather than a single well-being score, the study offers a more fine-grained picture of how father attachment relates to students' emotional experience. Fourth, the study addresses a population, Acehnese students in a strongly Islamic and paternal-centric cultural context, that has not previously been examined in the father attachment literature, thereby extending the generalizability of prior findings beyond Western and East Asian samples. Alongside these strengths, several limitations should be noted.

This study focused only on the association between paternal attachment and emotional well-being and did not take into account the influence of other important attachment figures, such as mothers or peers, nor other sources of emotional support. It also did not examine participants' family background characteristics, such as the

number of siblings, parental marital status, or socioeconomic conditions, which may also shape students' emotional well-being. This limitation is important because the present findings can only be interpreted as associations, not causal effects, given the correlational research design. In addition, the results are based on self-report measures, which may be influenced by response bias or social desirability. The use of a sample of female university students in Banda Aceh also limits the generalizability of the findings to other populations. Future research should therefore include broader family and contextual variables, examine the role of other attachment figures, use designs that allow causal inference, and recruit more diverse samples to better understand the factors that contribute to students' emotional well-being. Finally, this study did not take into account the influence of other important figures, such as mothers, peers, or other sources of emotional support; instead, it focused only on the association between paternal attachment and emotional well-being.

CONCLUSION AND SUGGESTION

This study found that father attachment is associated with students' emotional well-being: higher father attachment was associated with higher positive affect and, to a lesser extent, with lower negative affect. These findings should be interpreted cautiously, as the sample was restricted to students who had lived with both biological parents since childhood, and the study did not examine possible mediators (e.g., self-esteem, coping strategies) or moderators (e.g., cultural and family-relationship factors) that could shape this association.

Future studies should examine the role of other attachment figures, such as mothers and peers, and further explore how

the SPANE-B balance score reflects emotional well-being. Practically, these findings suggest the importance of father-daughter relationship strengthening programs in counseling services for female students and parent education initiatives at the university level.

From a policy perspective, these findings indicate that family-based mental health promotion programs in Indonesia, particularly in regions with strong paternal roles such as Aceh, may benefit from explicitly incorporating a father-daughter relationship component. University counseling centers are encouraged to develop father-inclusive psychoeducation modules. Additionally, premarital and parenting education programs at the community level should aim to strengthen fathers' communication and emotional support skills, given the demonstrated association between father attachment and students' positive and negative effect.

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AUTHOR CONTRIBUTION

Author Bela Lestari was the principal researcher who identified the research topic, selected the location/participants of research, collected and analysed data as well as prepared the manuscript. Author Afriani was the supervising lecturer who approved the research topic and study design, as well as guided, provided feedback on, and reviewed all parts of the research process. The first and second examiners, Author Kartika Sari and Author Wenny Aidina, assessed the research as well as gave constructive criticism and suggestions to improve the quality of this research.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest associated with this study.

DECLARATION OF ARTIFICIAL INTELLIGENCE (AI)

The authors note that ChatGPT was used in the preparation of this publication to improve writing clarity, summarize, and modify wording. The authors meticulously examined, revised, and verified all AI-generated content to guarantee accuracy and uniqueness. The author or authors are solely responsible for the final content of the manuscript. In accordance with the publisher's ethical rules, a thorough description of the tool's application is given in the "Introduction" or "Materials and Methods" section to guarantee transparency and assist the review process.

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