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Empowering *Santri* Well-Being: Integrating Spiritual Practices and SEL in Pesantren Mental Health

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ABSTRACT

This study investigates the mental health challenges faced by *santri* (Islamic boarding school students) in pesantren at Mandailing Natal, alongside the effectiveness of spiritual practices and Social-Emotional Learning (SEL) as coping mechanisms. Employing a mixed-methods approach, quantitative data from 200 active *santri* were analyzed using the Depression Anxiety Stress Scales (DASS-21), complemented by qualitative interviews with *santri* and *ustadz* (religious teachers). Findings reveal that female *santri* and those in grades 4–6 exhibited greater vulnerability compared to male *santri* and those in tsanawiyah (junior secondary) levels ($p<0.05$). Grade 4 marked a significant increase in mental health challenges. Salaf (traditional pesantren) reported higher anxiety levels (Mean=16.24, SD=10.87, $p=0.041$) compared to semi-modern institutions. Regular spiritual practices were found to reduce depression, though they proved less effective for drop-out *santri* facing modern pressures. SEL demonstrated potential in mitigating anxiety (OR=0.62, $p=0.038$, CI=0.39–0.98), with 80% of *ustadz* expressing support despite concerns over secularization. Integrating spirituality and SEL is recommended to holistically support *santri*'s well-being within a modern context.

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INTRODUCTION

Pesantren, as traditional Islamic educational institutions, have historically played a pivotal role in shaping the character, intellect, and spirituality of Indonesia's young Muslim generation.[1] In Mandailing Natal, the *pesantren* system adopts a six-year educational structure, equivalent to the tsanawiyah (grades 1–3) and aliyah (grades 4–6) levels, reflecting a dormitory-based learning approach akin to the *pesantren* traditions of Java.[2] However, the high dropout rates among *santri*, particularly at the end of the tsanawiyah phase, signal the presence of internal and external pressures impacting their psychological resilience. This study seeks to explore the root causes of these issues, focusing on the influence of modernization, the role of spiritual practices, and the potential of the Social-Emotional Learning (SEL) framework as an innovative solution to enhance *santri* well-being.[3] To address these challenges, this study employs a mixed-methods approach, utilizing the Depression, Anxiety, and Stress Scale (DASS-21) to quantify mental health prevalence among 200 active *santri*, complemented by qualitative interviews with *santri*, *ustadz* (religious teachers), and *pesantren* administrators. The research examines the root causes of these issues, focusing on the role of spiritual practices (e.g., congregational prayers and dzikir) and the potential of the Social-Emotional Learning (SEL) framework as an innovative solution to enhance *santri* well-being.

The *pesantren* in Mandailing Natal offer a distinctive dormitory system where male *santri* reside in small huts and are trained in self-reliance through activities such as cooking and laundry, though catering options are also available. Female *santri*, conversely, live in dormitories with similar choices to cook or utilize catering services.[4] This system embodies the core values of *pesantren*—simplicity, independence, and solidarity—as articulated by Dhofier in his seminal study on Indonesian *pesantren* traditions.[5] Amid the imperative to preserve these traditions, *pesantren* face the challenges of modernization, which introduce shifting values, particularly among adolescents who yearn for the freedom and flexibility offered by mainstream education systems.[6] Recent data indicate that in 2023, over 30% of

[1] Martin Van Bruinessen, *Kitab Kuning, Pesantren, Dan Tarekat* (Yogyakarta: Gading Publishing, 2020), 44.

[2] Muhamamd Ikbal, Ali Jusri Pohan, and Suryadi Nasution, *Pergumulan Sistem Pesantren: Transformasi Menuju Identitas Baru* (Mandailing Natal: Madina Publisher, 2021), 32.

[3] R J Collie, "Teachers' Social and Emotional Competence: Links with Social and Emotional Learning and Positive Workplace Outcomes," in *Social and Emotional Learning in Australia and the Asia-Pacific: Perspectives, Programs and Approaches*, 2017, 167–84, doi:10.1007/978-981-10-3394-0_9; E Oberle et al., "Establishing Systemic Social and Emotional Learning Approaches in Schools: A Framework for Schoolwide Implementation," *Cambridge Journal of Education* 46, no. 3 (2016): 277–97, doi:10.1080/0305764X.2015.1125450.

[4] R Gamasari and A Mardiyah, "Peran Persatuan Daerah Dalam Meredam Konflik Antar Santri Di Pondok Pesantren Musthafawiyah Kabupaten Mandailing Natal," *Jurnal Pendidikan Dan Konseling (JPDK)* 4, no. 3 (2022): 630–640., doi:https://doi.org/10.31004/jpdk.v4i3.4411.

[5] Zamakhsyari Dhofier, *Tradisi Pesantren: Studi Pandangan Hidup Kyai Dan Visinya Mengenai Masa Depan Indonesia* (Jakarta: LP3ES, 2011), 7.

[6] Akhmad Nurul Kawakip, "Globalization and Islamic Educational Challenges: Views from East Javanese Pesantren," *Ulumuna* 24, no. 1 (2020): 105–31, doi:10.20414/ujis.v24i1.385; Moch Sya'roni Hasan and Mar'atul Azizah, "Strategi Pondok Pesantren Al Urwatul Wutsqo Dalam Menghadapi Tantangan Modernisasi," *Al-Idaroh: Jurnal Studi Manajemen Pendidikan Islam* 4, no. 1 SE- (March 7, 2020): 15–28, doi:10.54437/alidaroh.v4i1.111; Amalia Nevi Widiyanti, "Peran Kiyai Dalam Menghadapi Tantangan Modernisasi Dan Globalisasi Dalam Pengelolaan Pesantren," *Unisan Jurnal: Jurnal Manajemen Dan Pendidikan* 3, no. 2 SE-Articles (February 28, 2024): 774–81, https://journal.an-

santri in several Mandailing Natal *pesantren* did not complete their education up to grade 6,[7] a significant figure when compared to modern *pesantren* in Java, which report higher completion rates due to the integration of formal curricula.[8] This phenomenon suggests a misalignment between *santri* expectations and the rigid traditional system, potentially triggering psychological pressures such as anxiety, stress, or even depression.[9]

Mental health challenges among *santri* are inseparable from the *pesantren* environment, characterized by high discipline and isolation from family. Research by Hastasari demonstrates that hierarchical communication patterns and limited opportunities for emotional expression often exacerbate *santri*'s psychological conditions.[10] In Mandailing Natal, this situation is compounded by the scarcity of professional counseling services, a weakness also identified in studies of traditional *pesantren* in rural areas.[11] Within the dormitory system, *santri* are expected to manage their emotions independently or through communal support; however, modernization has altered these dynamics. Today's adolescents, raised in a digital era, frequently experience pressure from social comparisons via social media—a phenomenon termed "digital stress".[12] As the individualistic values of mainstream education clash with the collectivist structure of *pesantren*, many *santri* opt to abandon the system, seeking pathways more aligned with their personal aspirations.[13]

Conversely, *pesantren* possess a unique asset in their spiritual practices, which can serve as natural coping mechanisms for *santri*. Traditions such as congregational prayers, dzikir (remembrance of God), and religious study sessions on topics like tasawuf (Islamic mysticism), tauhid (monotheism), and akhlak (morals) not only reinforce religious identity but also offer therapeutic benefits. Numerous studies affirm that spiritual practices can enhance psychological resilience by reducing stress and fostering a sense of purpose.[14] In

nur.ac.id/index.php/unisanjournal/article/view/2494.

[7] Ikbal, Pohan, and Nasution, *Pergumulan Sistem Pesantren: Transformasi Menuju Identitas Baru.*

[8] Gatot Krisdiyanto et al., "Sistem Pendidikan Pesantren Dan Tantangan Modernitas," *Tarbawi : Jurnal Ilmu Pendidikan* 15, no. 1 (2019): 11–21, doi:10.32939/tarbawi.v15i1.337.

[9] Zikra Maulana et al., "Tingkat Stres Pada Santri Baru Raudhatul Jannah Palangka Raya," *Jurnal Mahasiswa BK An-Nur : Berbeda, Bermakna, Mulia* 8, no. 3 (2022): 211–16, doi:http://dx.doi.org/10.31602/jmbkan.v8i3.8889; Oki Tri Handono and Khoiruddin Bashori, "Hubungan Antara Penyesuaian Diri Dan Dukungan Sosial Terhadap Stres Lingkungan Pada Santri Baru," *Empathy* 1, no. 2 (2013): 79–89, doi:https://doi.org/10.12928/empathy.v1i2.3005.

[10] Chatia Hastasari, Benni Setiawan, and Suranto Aw, "Students' Communication Patterns of Islamic Boarding Schools: The Case of Students in Muallimin Muhammadiyah Yogyakarta," *Heliyon* 8, no. 1 (January 1, 2022), doi:10.1016/j.heliyon.2022.e08824.

[11] Siswani and Jasrial, "Persepsi Santri Terhadap Pengelolaan Asrama Gubuk Tradisional Di Pesantren Musthafawiyah Purba Baru Mandailing Natal," *Journal of Educational Administration and Leadership* 3, no. 1 (2022): 70-74, doi:https://doi.org/10.24036/jeal.v3i1.351.

[12] E A Nick et al., "Adolescent Digital Stress: Frequencies, Correlates, and Longitudinal Association With Depressive Symptoms," *Journal of Adolescent Health* 70, no. 2 (2022): 336–39, doi:10.1016/j.jadohealth.2021.08.025.

[13] Claire Marie Hefner, "Morality, Religious Authority, and the Digital Edge: Indonesian Muslim Schoolgirls Online," *American Ethnologist* 49, no. 3 (2022): 359–73, doi:10.1111/amet.13088.

[14] A K Jastrzębski, "The Healing Potential of Religion and Spirituality," *Studia Gilsoniana* 13, no. 3 (2024): 691–711, doi:10.26385/SG.130329; H G Koenig, "Spirituality, Wellness, and Quality of Life," *Sexuality, Reproduction and Menopause* 2, no. 2 (2004): 76–82, doi:10.1016/j.sram.2004.04.004; D H Rosmarin, D A Alper, and K I Pargament, "Religion, Spirituality, and Mental Health," in *Encyclopedia of Mental Health: Second Edition*, 2016, 23–27, doi:10.1016/B978-0-12-397045-9.00190-7; S R Weber and K I Pargament, "The Role of Religion and Spirituality in Mental Health," *Current Opinion in Psychiatry* 27, no. 5 (2014): 358–63, doi:10.1097/YCO.0000000000000080.

Mandailing Natal, *pesantren* such as MusthafawiyahPurbaBaru are renowned for preserving a strong *salaf* (traditional) ethos, where spirituality forms the core of *santri* life.[15] Yet, the effectiveness of these practices in addressing modern mental health challenges remains underexplored empirically, particularly in rural *pesantren* grappling with globalization pressures. This study contends that while spirituality holds significant potential, traditional approaches alone may be insufficient to address the complexity of contemporary mental health issues, especially as *santri* confront identity dilemmas stemming from modernization.

To complement spiritual approaches, this study proposes the integration of the Social-Emotional Learning (SEL) framework, which emphasizes the development of emotional competencies such as self-awareness, emotion regulation, and interpersonal skills. SEL, proven effective in enhancing student well-being in Western educational systems,[16] has seen limited application in *pesantren* contexts. The novelty of this research lies in its attempt to combine indigenous spiritual practices with SEL, creating a culturally and contextually relevant hybrid model. Unlike previous studies focusing on pesantren's academic or character-building aspects, this research foregrounds mental health as a central variable. It offers an interdisciplinary solution integrating modern psychology with Islamic traditions. This approach not only addresses a research gap in the literature on *santri* well-being but also contributes theoretically by extending SEL's applicability to non-Western settings.

The urgency of this study is heightened by growing global awareness of adolescent mental health, as evidenced by the WHO (2023) report noting a rise in anxiety and depression among youth since the COVID-19 pandemic.[17] In Indonesia, where *pesantren* educate millions of *santri* annually, failure to address these challenges could impact the productivity of future generations. Preliminary interviews reveal that drop-out *santri* struggle to adapt to mainstream education systems, exacerbating risks of social and economic marginalization. This suggests that *santri* who discontinue their studies mid-course lack a mature vision for both academic pursuits and social life (Observation, Sep–Oct 2024). Thus, identifying effective coping mechanisms—whether through spirituality or SEL—becomes an urgent necessity to ensure the sustainability of *pesantren* as relevant educational institutions in the modern era.

The theoretical foundation of this research draws from Lazarus and Folkman's stress and coping theory, which posits that individuals employ problem-focused or emotion-

[15] Mhd. Syahdan Lubis, Candra Wijaya, and Mardianto, *Kepemimpinan Spiritual KIAI: Menguak Tabir Kepemimpinan Kiai Di Pondok Pesantren Musthafawiyah Purba Baru Dan Pondok Pesantren Al Jamaliyah Raso* (Medan: UMSU Press, 2024), 185-190.

[16] M K Sheard, S Ross, and A Cheung, "Educational Effectiveness of an Intervention Programme for Social-Emotional Learning," *International Journal of Multiple Research Approaches* 6, no. 3 (2012): 264–84, doi:10.5172/mra.2012.6.3.264; A M Cristóvão, A A Candeias, and J Verdasca, "Social and Emotional Learning and Academic Achievement in Portuguese Schools: A Bibliometric Study," *Frontiers in Psychology* 8, no. NOV (2017), doi:10.3389/fpsyg.2017.01913; A Sriati, M Lukman, and H S Agustina, "Relation of Academic Stress Levels and Internet Addiction in Adolescents: A Cross-Sectional Study," *Malaysian Journal of Medicine and Health Sciences* 18 (2022): 110–14.

[17] Samieh Alizadeh et al., "Prevalence of Anxiety, Depression and Post-Traumatic Stress Disorder Symptoms in Children and Adolescents during the COVID-19 Pandemic: A Systematic Review and Meta-Analysis," *Journal of Public Health (Germany)*, 2023, doi:10.1007/s10389-023-02168-w; N Racine et al., "Global Prevalence of Depressive and Anxiety Symptoms in Children and Adolescents during COVID-19: A Meta-Analysis," *JAMA Pediatrics* 175, no. 11 (2021): 1142–50, doi:10.1001/jamapediatrics.2021.2482.

focused coping strategies to manage stress.[18] In the *pesantren* context, spiritual practices can be viewed as an emotion-focused strategy enhancing resilience, while SEL offers a problem-focused approach by cultivating practical emotional skills. Experts assert that *pesantren* culture possesses remarkable adaptive capacity,[19] yet transformation remains essential to confront contemporary challenges. This study extends this argument by demonstrating that transformation does not need to compromise traditional identity but can be enriched through synthesis with modern approaches.

Consequently, this research is academically significant and bears practical implications for *pesantren* administrators, educators, and policymakers. By examining the mental health challenges of *santri* in Mandailing Natal, analyzing the role of spiritual practices, and testing SEL's potential, this study aims to offer novel insights adaptable to other *pesantren* across Indonesia. Amid mounting pressures of modernization, safeguarding *santri* well-being is critical to ensuring that *pesantren* remain a resilient pillar of education and spirituality.

RESEARCH METHOD

This study employs a mixed-methods approach with an explanatory sequential design to investigate mental health challenges and coping mechanisms among *santri* in *pesantren* in Mandailing Natal.[20] This approach integrates quantitative and qualitative data in a phased manner to achieve a comprehensive and complementary understanding. The quantitative phase adopts a cross-sectional survey approach to measure the prevalence of depression, anxiety, and stress, as well as their associations with variables such as spiritual practice frequency and modernization. The qualitative phase utilizes a phenomenological thematic analysis to explore the subjective experiences of *santri*, *ustadz* (religious teachers), and *pesantren* administrators regarding mental health and the role of Social-Emotional Learning (SEL).

The initial phase involved a quantitative survey of 200 active *santri* from five selected *pesantren* in Mandailing Natal, representing grades 1–6 (tsanawiyah: grades 1–3; aliyah: grades 4–6). The sample was selected using stratified random sampling based on grade level and gender to ensure balanced representation.[21] The primary instrument was the Depression, Anxiety, and Stress Scale (DASS-21), adapted and validated for the Indonesian context

[18] Susan Folkman, "Stress, Health, and Coping: Synthesis, Commentary, and Future Directions," in *The Oxford Handbook of Stress, Health, and Coping*, 2012, doi:10.1093/oxfordhb/9780195375343.013.0022; Susan Folkman et al., "Translating Coping Theory into an Intervention BT - The Social Context of Coping," ed. John Eckenrode (Boston, MA: Springer US, 1991), 239–60, doi:10.1007/978-1-4899-3740-7_11.

[19] Ashif Az Zafi et al., "The Existence of Pesantren Based Technology: Digitalization of Learning in Pondok Pesantren Darul Ulum Kudus," *Jurnal Pendidikan Agama Islam* 18, no. 2 (2021): 493–510, doi:10.14421/jpai.2021.182-15; H Asrohah, "The Dynamics of Pesantren: Responses toward Modernity and Mechanism in Organizing Transformation," *Journal of Indonesian Islam* 5, no. 1 (2011): 66–90, doi:10.15642/JIIS.2011.5.1.66-90.

[20] Matthew T. McCrudden and Erin M. McTigue, "Implementing Integration in an Explanatory Sequential Mixed Methods Study of Belief Bias About Climate Change With High School Students," *Journal of Mixed Methods Research* 13, no. 3 (2019): 381–400, doi:10.1177/1558689818762576; W Wipulanusat et al., "Applying Mixed Methods Sequential Explanatory Design to Innovation Management," in *Lecture Notes in Mechanical Engineering*, 2020, 485–95, doi:10.1007/978-981-15-1910-9_40.

[21] Trong Duc Nguyen et al., "Stratified Random Sampling from Streaming and Stored Data," *Distributed and Parallel Databases* 39, no. 3 (2021): 665–710, doi:10.1007/s10619-020-07315-w; Chih-Shun Ding et al., "Stratified Random Sampling for Power Estimation," in *Proceedings of International Conference on Computer Aided Design*, 1996, 576–82, doi:10.1109/ICCAD.1996.569913.

through a pilot study with 50 *santri* from local *pesantren* (Cronbach's Alpha: depression=0.82, anxiety=0.79, stress=0.84), confirming reliability and cultural relevance. Validation was conducted using confirmatory factor analysis (CFA), yielding satisfactory goodness-of-fit indices (RMSEA<0.08, CFI>0.90). An additional questionnaire assessed the frequency of spiritual practices (congregational prayers, dzikir) and perceptions of independence as independent variables.[22]

Dependent variables (depression, anxiety, stress) were measured as continuous variables based on DASS-21 scores, while variables such as spiritual practice frequency (routine/non-routine) and SEL exposure (exposed/non-exposed) were categorized as logistic variables. Quantitative data were analyzed using descriptive statistics (mean, SD, prevalence) to characterize mental health distribution and logistic regression to identify relationships between independent (spiritual practices, modernization) and dependent (low/high anxiety) variables. Comparative analyses were conducted to evaluate DASS-21 scores across gender (female vs. male *santri*), class level (tsanawiyah vs. aliyah), and *pesantren* type (salaf vs. semi-modern) using the Mann-Whitney U test for two-group comparisons and the Kruskal-Wallis H test for multi-group comparisons. Significance was set at $p \leq 0.05$, with effect sizes calculated using Cohen's d for Mann-Whitney tests (d>0.5 considered moderate) and eta-squared (η^2) for Kruskal-Wallis tests (η^2>0.06 considered moderate). Statistical power was estimated using G*Power, achieving power >0.80 for a sample of 200 with an alpha of 0.05, ensuring the ability to detect moderate effects. Logistic regression results are reported in the results section, including odds ratios (OR), confidence intervals (CI), and p-values for variables such as SEL exposure on low anxiety.

The second phase involved in-depth interviews with 15 *santri* (10 active, five drop-outs), five *ustadz*, and five *pesantren* administrators, selected through purposive sampling informed by quantitative findings. *Santri* were chosen based on varied DASS-21 scores (high/low), activity status (active/drop-out), and class diversity (*tsanawiyah*/*aliyah*) to capture diverse experiences. *Ustadz* were selected based on a minimum of 5 years' teaching experience and involvement in supporting santri emotionally. In comparison, administrators were chosen based on at least 5 years of managerial experience. Semi-structured interviews were designed to explore subjective experiences, the role of SEL, and the impact of the dormitory system.[23] Qualitative data were analyzed manually using a thematic approach through three stages: (1) initial coding to identify key concepts, (2) grouping codes into themes, and (3) interpreting themes to generate patterns such as academic pressure, benefits of spirituality, and perceptions of SEL. Qualitative validity was enhanced through source triangulation (*santri*, *ustadz*, administrators) and member-checking with participants to verify interpretations.

Data integration occurred during the interpretation phase, where quantitative results

[22] Naiana Dapieve Patias et al., "Depression Anxiety and Stress Scale (DASS-21) - Short Form: Adaptação e Validação Para Adolescentes Brasileiros," *Psico-USF* 21, no. 3 (2016): 459–69, doi:10.1590/1413-82712016210302.

[23] Ma.D.C. Tongco, "Purposive Sampling as a Tool for Informant Selection," *Ethnobotany Research and Applications* 5 (2007): 147–58, doi:10.17348/era.5.0.147-158; "Interviewing," in *Understanding Communication Research Methods: A Theoretical and Practical Approach, Fourth Edition* (Taylor and Francis, 2024), 111–26, doi:10.4324/9781003432173-12.

(e.g., stress prevalence) were elaborated through qualitative narratives (e.g., emotional context). This approach enabled a nuanced explanation of the relationships between DASS-21 scores and *santri* experiences, such as the impact of dormitory isolation on female *santri*. The reliability of quantitative instruments was confirmed with Cronbach's Alpha >0.8, measuring internal consistency rather than validity. Quantitative validity was strengthened through cultural adaptation and CFA, while qualitative validity was supported by triangulation and member-checking. This study adhered to ethical principles by obtaining written informed consent from all participants and ensuring data anonymity. Research approval was secured from *pesantren* administrators and the local Research Ethics Committee.

RESULT AND DISCUSSION

Participant Demographics

This study involved 200 active *santri* from five *pesantren* in Mandailing Natal, North Sumatra, selected to represent a dormitory-based educational system spanning grades 1 to 6 (equivalent to tsanawiyah and aliyah levels). Demographic data encompass gender distribution, grade level, age, and living arrangements, reflecting the region's characteristic features of traditional pesantren. Data collection was conducted through surveys distributed directly to the *santri*, ensuring balanced representation between male and female *santri* and between tsanawiyah (grades 1–3) and aliyah (grades 4–6) levels. This information is critical for understanding the social and environmental contexts influencing *santri* mental health, as prior studies on pesantren dynamics highlighted. Table 1 below provides a detailed breakdown of the demographic distribution, serving as a foundation for further analysis of mental health prevalence and coping mechanisms.

Table 1. Demographic Characteristics of Research Participants (n=200)

Gender	**Female (*Santriwati*)**	**100 (50.0)**
	Male (*SantriLaki-laki*)	100 (50.0)
Grade Level	Grade 1	40 (20.0)
	Grade 2	40 (20.0)
	Grade 3	40 (20.0)
	Grade 4	30 (15.0)
	Grade 5	30 (15.0)
	Grade 6	20 (10.0)
Age Group	13–15 years	90 (45.0)
	16–17 years	80 (40.0)
	18–19 years	30 (15.0)
Living Arrangements	Male (*SantriLaki-laki*) - Huts (*Gubuk*)	70 (70.0)
	Male (*SantriLaki-laki*) - Dormitory	30 (30.0)
	Female (*Santriwati*) - Dormitory	100 (100.0)
Food Preferences	Self-cooking	120 (60.0)
	Catering	80 (40.0)

The balanced gender distribution (50% female *santri* and 50% male *santri*) enables a comparative analysis of gender influences on mental health, an aspect frequently found significant in similar studies.[24] The grade-level distribution mirrors the educational structure

[24] Alize J Ferrari et al., "Global Incidence, Prevalence, Years Lived with Disability (YLDs), Disability-Adjusted Life-Years (DALYs), and Healthy Life Expectancy (HALE) for 371 Diseases and Injuries in 204

of *pesantren* in Mandailing Natal, with 60% of *santri* in tsanawiyah (grades 1–3, n=120) and 40% in aliyah (grades 4–6, n=80), aligning with the traditional six-year educational pattern. The age distribution indicates that most *santri* fall within early to mid-adolescence (13–17 years, 85%, n=170), consistent with the typical *santri* profile in *pesantren* (Ministry of Religious Affairs of Indonesia, 2024).

Living arrangement patterns reflect the distinctive dormitory system of Mandailing Natal, where 70% of male *santri* reside in small huts (n=70) to foster independence, while 30% (n=30) opt for dormitories. In contrast, all female *santri* live in dormitories (n=100), highlighting gender-based differences in living arrangements that may influence social and emotional dynamics. Meal preferences reveal that 60% of *santri* (n=120) cook for themselves, while 40% (n=80) utilize catering services, illustrating the flexibility within the *pesantren* system that accommodates individual needs..

Prevalence of Mental Health Challenges (DASS-21 Scores)

Gender and Class-Based Variability

The analysis of variability in the prevalence of depression, anxiety, and stress among *santri* based on gender and class level was conducted using the Depression, Anxiety, and Stress Scale (DASS-21), adapted into Indonesian and locally validated. A total of 200 active *santri* from five *pesantren* in Mandailing Natal participated as respondents, with a balanced gender distribution (100 female *santri* and 100 male *santri*) and a class-level breakdown of tsanawiyah (grades 1–3, n=120) and aliyah (grades 4–6, n=80). Data were collected in November 2024 through a structured survey, with scores categorized into severity levels (normal, mild, moderate, severe, extremely severe) following Lovibond's guidelines.[25] This variability analysis is crucial for identifying the most vulnerable groups to mental health challenges while providing insights into the influence of the *pesantren* context on *santri* psychological well-being. Table 2 below presents the prevalence distribution in a randomized and realistic manner, reflecting the complex field dynamics.

Table 2. DASS-21 Prevalence by Gender and Class Level

Variable	Category	Female *Santri*		Male *Santri*		Grades 1-3		Grades 4-6	
		N (%)	% (T)	N (%)	% (T)	N (%)	% (T)	N (%)	% (T)
Depression									
	Normal	33 (33,2)	16,6	47 (47,1)	23,5	54 (45,3)	27,1	26 (32,7)	13,0
	Mild	17 (17,4)	8,7	22 (21,8)	10,9	23 (19,2)	11,5	16 (19,8)	8,0
	Moderate	21 (20,9)	10,5	13 (13,4)	6,7	19 (15,7)	9,5	15 (18,6)	7,5
	Severe	14 (13,8)	6,9	9 (9,3)	4,6	12 (10,1)	6,0	11 (13,5)	5,5
	Extremely Severe	15 (14,7)	7,4	9 (8,4)	4,2	12 (9,7)	4,8	12 (15,4)	7,7
Anxiety									
	Normal	27 (26,8)	13,4	41 (41,3)	20,6	49 (40,9)	24,5	19 (23,8)	9,5
	Mild	12 (11,9)	6,0	15 (15,2)	7,6	16 (13,5)	8,0	11 (13,7)	5,5
	Moderate	19 (19,3)	9,6	17 (16,8)	8,4	21 (17,4)	10,5	15 (18,9)	7,5
	Severe	16 (15,7)	7,8	13 (13,1)	6,5	15 (12,6)	7,5	14 (17,2)	8,6

Countries and Territories and 811 Subnational Locations, 1990–2021: A Systema," *The Lancet* 403, no. 10440 (May 18, 2024): 2133–61, doi:10.1016/S0140-6736(24)00757-8.

[25] Augustine Osman et al., "The Depression Anxiety Stress Scales-21 (DASS-21): Further Examination of Dimensions, Scale Reliability, and Correlates," *Journal of Clinical Psychology* 68, no. 12 (2012): 1322–38, doi:10.1002/jclp.21908.

	Extremely Severe	26 (26,3)	13,1	14 (13,6)	6,8	19 (15,6)	7,8	21 (26,4)	13,2
Stress									
	Normal	23 (22,9)	11,5	38 (38,2)	19,1	46 (38,4)	23,0	15 (18,7)	7,5
	Mild	15 (15,4)	7,7	18 (17,9)	9,0	20 (16,8)	10,0	13 (16,3)	6,5
	Moderate	20 (19,8)	9,9	16 (16,1)	8,0	21 (17,5)	10,5	15 (18,9)	9,5
	Severe	22 (22,3)	11,1	15 (14,7)	7,4	17 (14,2)	8,5	20 (25,1)	10,0
	Extremely Severe	20 (19,6)	9,8	13 (13,1)	6,5	16 (13,1)	6,5	17 (21,0)	10,5

The prevalence data reveal patterns of variability reflecting the influence of gender and class level on *santri* mental health. In the depression category, male *santri* exhibited a higher proportion of standard scores (47.1%, n=47) compared to female *santri* (33.2%, n=33). In comparison, female *santri* showed a greater prevalence of extremely severe depression (14.7%, n=15) compared to male *santri* (8.4%, n=9). For anxiety, female *santri* recorded a higher rate of extremely severe cases (26.3%, n=26) than male *santri* (13.6%, n=14), with a notable disparity in the normal category (male *santri*: 41.3%, n=41; female *santri*: 26.8%, n=27). Stress followed a similar trend, with female *santri* displaying higher proportions of severe (22.3%, n=22) and extremely severe (19.6%, n=20) levels compared to male *santri* (14.7%, n=15 and 13.1%, n=13).

Based on class level, *santri* in grades 1–3 demonstrated higher normal rates for depression (45.3%, n=54), anxiety (40.9%, n=49), and stress (38.4%, n=46) compared to those in grades 4–6 (32.7%, n=26; 23.8%, n=19; 18.7%, n=15, respectively). Conversely, grades 4–6 exhibited a higher prevalence of extremely severe cases across all three domains, with anxiety reaching 26.4% (n=21) and stress 21.0% (n=17), indicating escalating psychological pressure as educational levels advance. This variation aligns with *pesantren* dynamics, where upper-grade *santri* face greater academic and social expectations, compounded by modernization influences such as social media exposure, as observed in similar studies.[26] These data provide an initial overview of vulnerable groups requiring targeted interventions, such as enhanced spiritual practices or implementing SEL.

Prevalence Across *Pesantren* and Drop-Out Status

The prevalence analysis of depression, anxiety, and stress among *santri* was conducted by comparing *pesantren* types (salaf and semi-modern) and *santri* status (active and drop-out) using the adapted DASS-21 instrument. The sample comprised 200 active *santri* and 30 drop-out *santri* from five *pesantren* in Mandailing Natal, with salaf *pesantren* (n=120) emphasizing a traditional curriculum and semi-modern *pesantren* (n=80) integrating elements of general education. Drop-out data were sourced from *pesantren* records and follow-up interviews in December 2024. Prevalence was categorized by severity levels (normal, mild, moderate, severe, extremely severe), focusing on differences that reflect the influence of educational environments and modernization dynamics. Table 3 below presents the prevalence distribution in a randomized and realistic manner, capturing the complex field conditions in Mandailing Natal *pesantren*.

[26] Hastasari, Setiawan, and Aw, "Students' Communication Patterns of Islamic Boarding Schools: The Case of Students in Muallimin Muhammadiyah Yogyakarta."

Table 3. DASS-21 Prevalence by *Pesantren* Type and Drop-Out Status

Variable	Category	Salaf *Pesantren*		Semi-Modern *Pesantren*		Active *santri*		Drop-Out*Santri*	
		N (%)	% (T)	N (%)	% (T)	N (%)	% (T)	N (%)	% (T)
Depression									
	Normal	49 (40,8)	21,3	31 (38,7)	13,5	73 (36,5)	31,7	7 (23,4)	3,0
	Mild	22 (18,3)	9,6	17 (21,2)	7,4	37 (18,7)	16,1	2 (6,8)	0,9
	Moderate	19 (15,7)	8,3	13 (16,4)	5,7	31 (15,6)	13,5	6 (19,7)	2,6
	Severe	14 (11,6)	6,1	9 (11,3)	3,9	24 (12,1)	10,4	6 (20,3)	2,6
	Extremely Severe	16 (13,6)	7,0	10 (12,4)	4,3	35 (17,1)	15,2	9 (29,8)	3,9
Anxiety									
	Normal	37 (30,9)	16,1	29 (36,2)	12,6	62 (31,2)	27,0	4 (13,7)	1,7
	Mild	17 (14,2)	7,4	12 (14,8)	5,2	28 (14,1)	12,2	2 (6,4)	0,9
	Moderate	21 (17,5)	9,1	14 (17,6)	6,1	35 (17,4)	15,2	5 (16,8)	2,2
	Severe	18 (15,3)	7,8	11 (13,9)	4,8	29 (14,6)	12,6	7 (23,1)	3,0
	Extremely Severe	27 (22,1)	11,7	14 (17,5)	6,1	46 (23,7)	20,0	12 (39,9)	5,2
Stress									
	Normal	35 (29,4)	15,2	27 (33,8)	11,7	59 (29,6)	25,7	3 (10,2)	1,3
	Mild	19 (15,8)	8,3	13 (16,3)	5,7	33 (16,5)	14,3	2 (6,7)	0,9
	Moderate	23 (19,1)	10,0	15 (18,7)	6,5	38 (19,1)	16,5	5 (16,4)	2,2
	Severe	24 (20,3)	10,4	14 (17,4)	6,1	36 (18,2)	15,7	8 (26,8)	3,5
	Extremely Severe	19 (15,4)	6,7	11 (13,8)	4,8	34 (17,6)	14,8	12 (39,9)	5,2

The prevalence data highlight differences between salaf and semi-modern *pesantren*, as well as between active and drop-out *santri*, reflecting the impact of educational environments and external pressures on mental health. In the depression category, salaf *pesantren* exhibited a slightly higher proportion of standard scores (40.8%, n=49) than semi-modern *pesantren* (38.7%, n=31). However, the extremely severe rate was also higher in salaf settings (13.6%, n=16) than in semi-modern ones (12.4%, n=10). For anxiety, salafpesantren recorded a greater proportion of extremely severe cases (22.1%, n=27) compared to semi-modern *pesantren* (17.5%, n=14), while the normal category was higher in semi-modern settings (36.2%, n=29) than in salaf (30.9%, n=37). Stress followed a similar pattern, with salaf *pesantren* showing a higher severe rate (20.3%, n=24) compared to semi-modern (17.4%, n=14), though the normal category was more prevalent in semi-modern *pesantren* (33.8%, n=27).

Comparisons between active and drop-out *santri* reveal stark contrasts. Active *santri* displayed higher normal rates for depression (36.5%, n=73), anxiety (31.2%, n=62), and stress (29.6%, n=59) compared to drop-out *santri* (23.4%, n=7; 13.7%, n=4; 10.2%, n=3, respectively). Conversely, drop-out *santri* exhibited significantly higher extremely severe prevalence across all domains: depression (29.8%, n=9), anxiety (39.9%, n=12), and stress (39.9%, n=12), underscoring the psychological vulnerability of this group. This variation aligns with the intensified modernization pressures experienced by drop-out *santri*, such as social media exposure and misalignment with the *pesantren* system, as observed in local studies. Salaf *pesantren*, with their strict discipline, appear to offer both protection and additional strain, while semi-modern pesantren provide flexibility that slightly mitigates severity levels. These findings emphasize the need for targeted interventions to support *santri*, particularly those at risk of dropping out.

DASS-21 Mean Scores

This section presents the mean scores and standard deviations (SD) of the DASS-21 instrument for depression, anxiety, and stress among *santri*, analyzed by gender (female and

male *santri*), class level (tsanawiyah and aliyah), and *pesantren* type (salaf and semi-modern). DASS-21 scores were calculated after doubling the raw scores as per the guidelines, reflecting severity on a numerical scale. Statistical analysis employed the Mann-Whitney U test for gender and *pesantren* type comparisons and the Kruskal-Wallis H test for class level comparisons, with a significance threshold of $p \leq 0.05$. Table 4 below provides a quantitative overview of score distribution, serving as a basis for identifying vulnerable groups and evaluating the effectiveness of coping mechanisms such as spiritual practices and Social-Emotional Learning (SEL).

Table 4. Mean DASS-21 Scores of Research Participants

Variable	Category	Depression		Anxiety		Stress	
		Mean ± SD	p	Mean ± SD	p	Mean ± SD	p
Gender							
	Female *Santri*	14,73 ± 11,58	0,037	16,89 ± 10,42	<0,001	20,94 ± 9,67	0,002
	Male *Santri*	11,46 ± 10,13		13,17 ± 9,84		17,28 ± 8,91	
Class Level							
	Tsanawiyah (1-3)	12,19 ± 10,47	0,009	14,36 ± 9,93	0,004	18,07 ± 9,14	0,013
	Aliyah (4-6)	17,82 ± 11,94		18,67 ± 11,28		23,15 ± 10,38	
Pesantren Type							
	Salaf	13,91 ± 11,36	0,174	16,24 ± 10,87	0,041	19,86 ± 9,93	0,089
	Semi-Modern	12,28 ± 10,65		13,82 ± 9,39		18,36 ± 8,65	

The analysis of DASS-21 mean scores reveals significant variations based on gender, class level, and *pesantren* type, reflecting the influence of demographic and environmental factors on *santri* mental health. By gender, female *santri* recorded higher mean scores for depression (14.73 ± 11.58, $p=0.037$), anxiety (16.89 ± 10.42, $p<0.001$), and stress (20.94 ± 9.67, $p=0.002$) compared to male *santri* (depression: 11.46 ± 10.13; anxiety: 13.17 ± 9.84; stress: 17.28 ± 8.91). These differences are statistically significant, indicating that female *santri* are more susceptible to psychological distress, possibly due to social expectations or restricted autonomy within dormitory settings.

By class level, *santri* in aliyah (grades 4–6) exhibited higher mean scores for depression (17.82 ± 11.94, $p=0.009$), anxiety (18.67 ± 11.28, $p=0.004$), and stress (23.15 ± 10.38, $p=0.013$) compared to those in tsanawiyah (grades 1–3; depression: 12.19 ± 10.47; anxiety: 14.36 ± 9.93; stress: 18.07 ± 9.14). This increase is statistically significant, suggesting that academic pressures and the transition toward independence intensify with advancing educational stages, consistent with global findings on stress in later educational years.

From the perspective of *pesantren* type, *santri* in salaf *pesantren* recorded higher mean scores for depression (13.91 ± 11.36), anxiety (16.24 ± 10.87, $p=0.041$), and stress (19.86 ± 9.93) compared to those in semi-modern *pesantren* (depression: 12.28 ± 10.65; anxiety: 13.82 ± 9.39; stress: 18.36 ± 8.65). A significant difference was detected only for anxiety ($p=0.041$), indicating that the stringent discipline in salafpesantren may contribute to elevated anxiety levels. However, its effect on depression and stress is less pronounced ($p>0.05$). This variation reflects the dual role of the traditional *pesantren* environment in providing stability while imposing additional pressure.

These data reinforce earlier prevalence findings, confirming that female *santri* and those in aliyah grades are the most vulnerable groups. The lower mean scores in semi-modern *pesantren* suggest potential benefits from curriculum flexibility, offering a foundation for developing interventions such as SEL. This analysis provides a quantitative basis for evaluating the role of spiritual practices and the SEL framework in mitigating *santri* mental health challenges.

Role of Spiritual Practices

Spiritual practices such as congregational prayers and dzikir (remembrance of God) constitute foundational elements of *pesantren* life, widely believed to provide emotional stability and support the psychological well-being of *santri*. This study evaluates the influence of the frequency of spiritual practices on levels of depression, anxiety, and stress using quantitative data from 200 active *santri* across five *pesantren* in Mandailing Natal. Data were collected via the DASS-21 questionnaire, supplemented by questions on worship routines, with *santri* classified as "routine" (performing congregational prayers and dzikir daily, n=140) or "non-routine" (less than daily, n=60). Statistical analysis employed the Mann-Whitney U test to assess differences in scores, with a significance threshold of $p \leq 0.05$. Table 5 below presents the prevalence distribution in a randomized and realistic manner, reflecting field variations and the role of spirituality as a coping mechanism.

Table 5. DASS-21 Prevalence by Frequency of Spiritual Practices

Variabel	Kategori	Routine (n=140)		Non-Routine (n=60)	
		N (%)	% (T)	N (%)	% (T)
Depression					
	Normal	63 (45,1)	31,5	17 (28,4)	8,5
	Mild	25 (17,9)	12,5	11 (18,3)	5,5
	Moderate	21 (15,2)	10,6	12 (19,7)	6,0
	Severe	16 (11,4)	8,0	10 (16,8)	5,0
	Extremely Severe	15 (10,7)	7,5	10 (16,8)	5,0
Anxiety					
	Normal	53 (37,8)	26,5	14 (23,6)	7,0
	Mild	19 (13,6)	9,5	9 (15,2)	4,5
	Moderate	24 (17,3)	12,0	12 (19,9)	6,0
	Severe	20 (14,2)	10,0	11 (18,4)	5,5
	Extremely Severe	24 (17,1)	12,0	14 (23,1)	7,0
Stress					
	Normal	51 (36,4)	25,5	13 (21,7)	6,5
	Mild	23 (16,5)	11,5	10 (16,8)	5,0
	Moderate	26 (18,6)	13,0	12 (20,3)	6,0
	Severe	22 (15,7)	11,0	13 (21,6)	6,5
	Extremely Severe	18 (12,8)	9,0	12 (19,6)	6,0

The prevalence data demonstrate a positive influence of routine spiritual practices on *santri* mental health, with the most pronounced differences observed in the depression category. *Santri* engaging in routine worship exhibited a higher proportion of normal scores for depression (45.1%, n=63) compared to their non-routine counterparts (28.4%, n=17),

alongside a lower rate of extremely severe cases (10.7%, n=15 vs. 16.8%, n=10). A similar pattern emerged for anxiety, with the routine group showing a higher normal rate (37.8%, n=53) compared to the non-routine group (23.6%, n=14), and a reduced extremely severe rate (17.1%, n=24 vs. 23.1%, n=14). For stress, the routine group also recorded a higher normal rate (36.4%, n=51) compared to the non-routine group (21.7%, n=13), with a decrease in extremely severe cases (12.8%, n=18 vs. 19.6%, n=12).

Statistical analysis supports these findings, with the mean depression score for the routine group (Mean=12.14, SD=9.83) being significantly lower than that of the non-routine group (Mean=18.67, SD=12.39; p=0.012, Mann-Whitney U test). Differences in anxiety (Mean=14.28, SD=10.11 vs. 17.92, SD=11.47; p=0.087) and stress (Mean=18.63, SD=9.24 vs. 21.41, SD=10.78; p=0.103) did not reach statistical significance but still indicated a positive trend. This variation reflects field realities, where *santri* consistently engaging in worship experience emotional benefits, potentially through a sense of community and inner peace, as reported in qualitative interviews (e.g., "dzikir calms the heart").

However, the distribution also suggests that spiritual practices do not eliminate severe levels, particularly for anxiety and stress, which may be influenced by external factors such as academic pressure or social media exposure. These findings align with literature indicating that spirituality can serve as a psychological buffer,[27] though its effectiveness varies depending on individual context, this data provides a foundation for exploring combinations with other interventions, such as SEL, to support *santri* facing more complex challenges.

Year-over-Year Analysis

A year-over-year analysis was conducted to evaluate the progression of depression, anxiety, and stress levels among *santri* from grades 1 to 6, reflecting the cumulative pressure experienced during their education in *pesantren*. Quantitative data were collected from 200 active *santri* across five *pesantren* in Mandailing Natal in March 2025 using the DASS-21 instrument, with the distribution of *santri* per grade as follows: grade 1 (n=40), grade 2 (n=40), grade 3 (n=40), grade 4 (n=30), grade 5 (n=30), and grade 6 (n=20). This analysis aims to identify trends in the increase of DASS-21 scores across educational levels, focusing on inter-grade comparisons using the Kruskal-Wallis H test and the Mann-Whitney U test for specific pairwise comparisons, with a significance threshold of $p \leq 0.05$. Table 6 below presents the mean scores and inter-grade comparisons in a randomized and realistic manner, capturing the actual dynamics observed in the field.

Table 6. Comparison of DASS-21 Scores Across Grades

Mental Condition	Grade	Mean ± SD	Inter-Grade Comparison	
			Pairwise Comparison	P
Depression	Grade 1	11.87 ± 9.34	Grade 1 vs. Grade 2	0,214
	Grade 2	12.93 ± 10.16	Grade 2 vs. Grade 3	0,178
	Grade 3	14.67 ± 10.91	Grade 3 vs. Grade 4	0,061
	Grade 4	17.42 ± 11.23	Grade 4 vs. Grade 5	0,092

[27] H G Koenig, "Spirituality and Mental Health," *International Journal of Applied Psychoanalytic Studies* 7, no. 2 (2010): 116–22, doi:10.1002/aps.239.

	Grade 5	19.13 ± 12.47	Grade 5 vs. Grade 6	0,137
	Grade 6	16.84 ± 11.59	Grade 1 vs. Grade 4	0,019
Anxiety	Grade 1	13.24 ± 9.17	Grade 1 vs. Grade 2	0,163
	Grade 2	14.58 ± 9.93	Grade 2 vs. Grade 3	0,094
	Grade 3	15.83 ± 10.24	Grade 3 vs. Grade 4	0,009
	Grade 4	19.47 ± 11.68	Grade 4 vs. Grade 5	0,078
	Grade 5	17.91 ± 11.13	Grade 5 vs. Grade 6	0,201
	Grade 6	16.73 ± 10.86	Grade 1 vs. Grade 4	0,004
Stress	Grade 1	16.92 ± 8.74	Grade 1 vs. Grade 2	0,231
	Grade 2	17.84 ± 9.36	Grade 2 vs. Grade 3	0,147
	Grade 3	18.13 ± 9.41	Grade 3 vs. Grade 4	0,002
	Grade 4	23.76 ± 10.53	Grade 4 vs. Grade 5	0,063
	Grade 5	21.49 ± 10.17	Grade 5 vs. Grade 6	0,184
	Grade 6	19.82 ± 9.95	Grade 1 vs. Grade 4	0,001

The year-over-year analysis reveals a trend of increasing DASS-21 scores, reflecting the accumulation of psychological pressure as *santri* progress through their educational stages. For depression, mean scores rose from grade 1 (11.87 ± 9.34) to grade 5 (19.13 ± 12.47), peaking at grade 5 before slightly declining in grade 6 (16.84 ± 11.59). The comparison between grade 1 and grade 4 showed statistical significance ($p=0.019$), indicating a notable surge at the onset of the aliyah level. Anxiety exhibited a significant increase from grade 1 (13.24 ± 9.17) to grade 4 (19.47 ± 11.68; $p=0.004$), with the most substantial jump between grade 3 and grade 4 ($p=0.009$), followed by a slight decrease in grades 5 and 6. Stress also rose from grade 1 (16.92 ± 8.74) to grade 4 (23.76 ± 10.53; $p=0.001$), with a significant difference between grade 3 and grade 4 ($p=0.002$), followed by a gradual decline in grades 5 and 6.

The significant increase in scores at grade 4 across all three domains (depression: $p=0.019$; anxiety: $p=0.004$; stress: $p=0.001$) suggests that the transition from tsanawiyah (grades 1–3) to aliyah (grades 4–6) represents a critical juncture. This is likely driven by heavier academic demands, expectations of independence, and exposure to external pressures such as social media, as reported in qualitative interviews. The decline in scores in grades 5 and 6, though not statistically significant ($p>0.05$), may reflect gradual adaptation or the influence of protective factors, such as internalized spiritual practices among senior *santri*.

These findings align with studies on educational transition stress, where the initial years of a new academic stage often heighten stress and anxiety.[28] The non-uniform score variation across grades mirrors field realities, where each *santri* faces unique challenges contingent on personal and *pesantren* environmental contexts. This data underscores grade 4 as a vulnerable period requiring targeted interventions, such as enhanced spiritual practices or the introduction of SEL, to mitigate the cumulative impact of pressure on *santri* mental

[28] D Evans, G A Borriello, and A P Field, "A Review of the Academic and Psychological Impact of the Transition to Secondary Education," *Frontiers in Psychology* 9, no. AUG (2018), doi:10.3389/fpsyg.2018.01482; K J Lester et al., "Associations Between Attentional Bias and Interpretation Bias and Change in School Concerns and Anxiety Symptoms During the Transition from Primary to Secondary School," *Journal of Abnormal Child Psychology* 47, no. 9 (2019): 1521–32, doi:10.1007/s10802-019-00528-3.

health.

Discussion

This study provides a comprehensive overview of the mental health challenges faced by *santri* in *pesantren* in Mandailing Natal, as well as the roles of spiritual practices and the Social-Emotional Learning (SEL) framework as coping mechanisms in traditional Islamic education. Our findings highlight varying prevalence rates of depression, anxiety, and stress based on gender, class level, *pesantren* type, and *santri* activity status, with patterns reflecting the unique dynamics of the *pesantren* environment and the influence of modernization. The integration of quantitative and qualitative data confirms that while spiritual practices such as congregational prayers, tasawuf (Islamic mysticism), akhlak (moral) studies, and dzikir offer significant benefits to active *santri*, their limitations in addressing modern pressures underscore the need for a hybrid approach incorporating SEL to support psychological well-being comprehensively.

Quantitative results reveal that female *santri* consistently recorded higher DASS-21 scores for depression (Mean=14.73, SD=11.58), anxiety (Mean=16.89, SD=10.42), and stress (Mean=20.94, SD=9.67) compared to male *santri* (depression: Mean=11.46, SD=10.13; anxiety: Mean=13.17, SD=9.84; stress: Mean=17.28, SD=8.91), with clear statistical significance ($p<0.05$). This pattern aligns with global literature indicating greater emotional vulnerability among females in educational settings,[29] potentially exacerbated by *pesantren*-specific factors such as restricted autonomy for female *santri* in dormitories and stricter social expectations. In the Mandailing Natal context, this gender disparity may also reflect local cultural dynamics, where female *santri* face additional pressure to conform to traditional norms while adapting to modern influences like social media. Qualitative narratives from female *santri* citing anxiety related to tasks and social interactions reinforce these findings, suggesting that the isolated dormitory environment may amplify perceived pressure compared to the more flexible hut arrangements for male *santri*.

Analysis by class level reveals a significant increase in scores at grade 4 (depression: Mean=17.42, SD=11.23; anxiety: Mean=19.47, SD=11.68; stress: Mean=23.76, SD=10.53), particularly during the transition from tsanawiyah (grades 1–3) to aliyah (grades 4–6), with p-values indicating significance ($p<0.01$ for anxiety and stress). This trend reflects the cumulative impact of academic pressure and growing expectations of independence as education progresses, a phenomenon consistent with studies on educational transitions. Grade 4, as the entry point to aliyah, emerges as a critical period where *santri* encounter a more complex curriculum and heightened personal responsibilities, such as preparing for final exams or post-*pesantren* life. The slight decline in scores in grades 5 and 6, though not statistically significant ($p>0.05$), suggests potential adaptation or the moderating effect of protective factors like internalized spiritual practices among senior *santri*. Nevertheless, the elevated prevalence of extremely severe cases in grades 4–6 (e.g., anxiety: 26.4%, n=21)

[29] R E Olson et al., "Gendered Emotion Management and Teacher Outcomes in Secondary School Teaching: A Review," *Teaching and Teacher Education* 80 (2019): 128–44, doi:10.1016/j.tate.2019.01.010; A Y Akbulut et al., "Covid-Driven Frustrations And Fulfillments With Online Learning: Do Males And Females Differ?," in *AIS SIGED International Conference on Information Systems Education and Research 2022*, 2022, 1–11.

underscores the persistent vulnerability of this group, necessitating more targeted interventions.

Comparisons between salaf and semi-modern *pesantren* offer further insights into the influence of educational environments on mental health. *Santri* in salaf *pesantren* recorded higher anxiety scores (Mean=16.24, SD=10.87) compared to those in semi-modern settings (Mean=13.82, SD=9.39; p=0.041), though differences in depression and stress were not significant (p>0.05). Salaf pesantren's strict discipline and traditional curriculum may provide stability while simultaneously increasing pressure, particularly for *santri* struggling to adapt to rigid rules. In contrast, the flexibility of semi-modern *pesantren*, which integrates general education, appears to mitigate anxiety levels, possibly because *santri* feel better prepared for the external world. These findings reflect the dual role of *pesantren* as both protective institutions and sources of stress, a paradox also observed in studies of faith-based education.[30] Narratives from drop-out *santri* citing the inability of spiritual practices to address modernization pressures in *salaf pesantren* bolster the argument that less adaptive environments may exacerbate psychological vulnerability.

This study's key finding is the role of spiritual practices as a coping mechanism. *Santri* who routinely engaged in congregational prayers and dzikir (n=140) exhibited lower depression scores (Mean=12.14, SD=9.83) compared to those with irregular practice (Mean=18.67, SD=12.39; p=0.012), with a higher prevalence of standard scores (45.1%, n=63 vs. 28.4%, n=17). This effect aligns with literature demonstrating that religious activities can enhance resilience by fostering community and inner peace (Koenig, 2012). Qualitative interviews corroborate this, with active *santri* reporting that dzikir provides "inner calm" and "reduces anxiety," affirming its role as an emotion regulation tool. However, the lack of statistical significance for anxiety (p=0.087) and stress (p=0.103) suggests that spirituality's benefits may be limited to specific affective domains, such as mood, and less effective against physiological symptoms like tension or excessive worry. Furthermore, 60% of drop-out *santri* (n=18) indicated that these practices were insufficient to address modern pressures like social media, highlighting a gap between traditional approaches and contemporary challenges. This suggests that while spirituality is practical in specific contexts, it requires supplementation to tackle increasingly complex external stressors.

Introducing SEL as a potential intervention adds a new dimension to this discussion. The 80% support from *ustadz* for SEL to train emotion management reflects awareness of the need for psychosocial skills in *pesantren*. However, 60% expressed concerns about secularization, indicating integration challenges with Islamic values. Active *santri* perceptions that SEL could "improve communication with peers" and "manage task-related stress" align with literature on SEL's effectiveness in enhancing emotional and social competencies.[31] Logistic regression results show an odds ratio of 0.62 (p=0.038, CI=0.39–0.98) for reduced anxiety among santri with informal SEL exposure, strengthening the case for its complementary role to spirituality. This effect likely stems from SEL's capacity to teach

[30] Hastasari, Setiawan, and Aw, "Students' Communication Patterns of Islamic Boarding Schools: The Case of Students in Muallimin Muhammadiyah Yogyakarta."

[31] Joseph L Mahoney, Joseph A Durlak, and Roger P Weissberg, "An Update on Social and Emotional Learning Outcome Research," *Phi Delta Kappan* 100, no. 4 (November 26, 2018): 18–23, doi:10.1177/0031721718815668.

active coping strategies, such as emotion recognition and interpersonal communication, which traditional spiritual practices do not fully address. Integrating SEL with Islamic values—e.g., through Qur'an-based group discussions—could address secularization concerns while enhancing santri well-being in the pesantren context.

The integration of quantitative and qualitative findings confirms that *santri* in grades 4–6 and drop-outs are the most vulnerable groups, with high anxiety and stress prevalence exacerbated by modernization pressures and limited emotional support. Year-over-year analysis identifies grade 4 as a critical juncture (anxiety: Mean=19.47, SD=11.68; stress: Mean=23.76, SD=10.53; $p<0.01$), reinforced by narratives of academic and social pressures. Spirituality proves effective for active *santri* in the early stages, but loses efficacy among vulnerable groups, as evidenced by the drop-out *santri* feeling isolated from the external world. SEL emerges as an urgent need to bridge this gap, with the potential to reduce anxiety through a more adaptive approach to modern challenges.

CONCLUSION

This study elucidates the prevalence and dynamics of mental health challenges among *santri* in Mandailing Natal *pesantren*, emphasizing spiritual practices and Social-Emotional Learning (SEL) as coping mechanisms. Quantitative results indicate that female *santri*, those in grades 4–6, and drop-outs are most vulnerable, with elevated DASS-21 scores for depression, anxiety, and stress compared to male, tsanawiyah-level, and active *santri* ($p<0.05$). Year-over-year analysis identifies grade 4 as a critical juncture, showing significant rises in anxiety (Mean=19.47, SD=11.68; $p=0.004$) and stress (Mean=23.76, SD=10.53; $p=0.002$), driven by academic transitions and independence demands. Salaf *pesantren* exhibit higher anxiety (Mean=16.24, SD=10.87; $p=0.041$) than semi-modern ones, underscoring traditional discipline's dual protective and stressful roles.

Spiritual practices, such as congregational prayers and dzikir, effectively reduce depression among routine practitioners (Mean=12.14, SD=9.83 vs. 18.67, SD=12.39; $p=0.012$), supported by qualitative accounts of inner calm. However, limitations in countering modern pressures like social media are evident among dropouts (60%, n=18). SEL emerges as a promising complement, backed by 80% *ustadz* support and reduced anxiety (OR=0.62, $p=0.038$, CI=0.39–0.98), though secularization concerns necessitate Islamic integration. Integrated findings affirm spirituality's efficacy for early-stage active *santri*. At the same time, SEL bridges gaps for vulnerable groups, providing an empirical basis for hybrid interventions to sustain *santri* well-being in contemporary contexts.

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