

# Overcrowded Classrooms in Pesantren Musthafawiyah: Exploring the Impact of High Student Density on Female Learners in Limited Spaces

**Suryadi Nasution**

Sekolah Tinggi Agama Islam Negeri Mandailing Natal, Indonesia  
[suryadinst@stain-madina.ac.id](mailto:suryadinst@stain-madina.ac.id)

**Andri Muda Nst**

Sekolah Tinggi Agama Islam Negeri Mandailing Natal, Indonesia  
[andrimudanst@stain-madina.ac.id](mailto:andrimudanst@stain-madina.ac.id)

**Zuhdi Hsb**

Sekolah Tinggi Agama Islam Negeri Mandailing Natal, Indonesia  
[zuhdihsb@stain-madina.ac.id](mailto:zuhdihsb@stain-madina.ac.id)

**Ali Jusri Pohan**

Sekolah Tinggi Agama Islam Negeri Mandailing Natal, Indonesia  
[alijusripohan@stain-madina.ac.id](mailto:alijusripohan@stain-madina.ac.id)

## Abstract

*This study explores the impact of high classroom density on female students (santriwati) at Pesantren Musthafawiyah in North Sumatra, focusing on a population of 4,598 santriwati distributed across 77 classrooms (60 students per class). Employing a qualitative phenomenological approach, data were collected through in-depth interviews, observations, and document analysis involving 18 participants. The findings reveal three major impacts. First, overcrowded spaces cause physical and psychological discomfort, such as fatigue and difficulty concentrating, due to poor ventilation and excessive noise. Second, overcrowding erases the identity of santriwati, silencing their voices and deepening isolation within unequal gender dynamics. Third, although santriwati demonstrate resilience through strategies like self-directed learning, this resilience remains fragile, marked by declining academic performance and motivation as a result of sustained pressure. This research highlights that classroom overcrowding not only impedes learning but also threatens the well-being of santriwati, challenging the essence of inclusive Islamic education. It is recommended that reforms in facilities and classroom management be implemented to create a supportive learning environment. This study contributes new insights to the discourse on gender-based education in Islamic boarding schools (pesantren), emphasizing the urgency of structural changes for the empowerment of santriwati.*

**Keywords:** *Overcrowding, Santriwati, Islamic Education, Gender.*

## **Abstrak**

Penelitian ini mengeksplorasi dampak kepadatan kelas yang tinggi terhadap santriwati di Pesantren Musthafawiyah, Sumatera Utara, dengan fokus pada 4.598 santriwati dalam 77 rombel (60 siswi per kelas). Menggunakan pendekatan fenomenologis kualitatif, data dikumpulkan melalui wawancara mendalam, observasi, dan analisis dokumen dari 18 partisipan. Temuan mengungkap tiga dampak utama. Pertama, ruang sesak menyebabkan ketidaknyamanan fisik dan psikologis, seperti kelelahan dan sulit konsentrasi, akibat ventilasi buruk dan kebisingan. Kedua, overcrowding menghapus identitas santriwati, membungkam suara mereka dan memperdalam isolasi dalam dinamika gender yang tidak setara. Ketiga, meskipun santriwati menunjukkan ketahanan melalui strategi seperti belajar mandiri, ketahanan ini rapuh, ditandai dengan penurunan prestasi dan motivasi akibat tekanan berkelanjutan. Penelitian ini menyoroti bahwa kepadatan kelas tidak hanya menghambat pembelajaran, tetapi juga mengancam kesejahteraan santriwati, menantang esensi pendidikan Islam yang inklusif. Disarankan adanya reformasi fasilitas dan pengelolaan kelas untuk menciptakan lingkungan belajar yang mendukung. Studi ini memberikan kontribusi baru pada diskursus pendidikan berbasis gender di pesantren, menekankan urgensi perubahan struktural demi pemberdayaan santriwati.

**Kata Kunci:** Overcrowding, Santriwati, Pendidikan Islam, Gender.

## **Introduction**

Education in Islamic boarding schools (pesantren), as one of the oldest forms of educational institutions in Indonesia, has long been a vital pillar in shaping the character, morality, and intellectual capacity of young Muslims (van Es 2019). However, behind the romanticism of history and the idealism of religious-based education lies a reality far from idyllic: overcrowded classrooms, packed with students struggling for space, and nearly nonexistent room for movement. Pesantren Musthafawiyah, a historic Islamic boarding school in North Sumatra, reflects this paradox. With a total of 13,877 students—9,279 males distributed across 118 groups (rombongan belajar, or rombel) and 4,598 female students (santriwati) in 77 rombel—this institution faces immense challenges in managing student density (Ahmad Iffan 2021; Gamasari and Mardiyah 2022; Nur and Nasution 2022). These figures represent a social reality that highlights a genuine spatial crisis, particularly for santriwati, who must study in more constrained conditions compared to their male counterparts. On average, each male rombel accommodates around 78 students, while female rombel reach up to 60 students per class. These numbers far exceed the ideal classroom density recommended by educational experts, which typically ranges between 20-30 students per class to ensure effective learning (Maxwell 2009; West and Meier 2020). How can meaningful learning occur when the physical and psychological space of santriwati is continually eroded by uncontrolled overcrowding?

Overcrowding in classrooms is not a new phenomenon in the world of education, but its impact on santriwati at Pesantren Musthafawiyah introduces a more complex and urgent dimension worthy of investigation. Theoretically, educational ecology theory emphasizes that micro-environments, such as classrooms, play a crucial role in shaping students' cognitive and emotional development processes (Johnson 2010; El Zaatari and Maalouf 2022; Cipriano et al. 2019). When classrooms become overly crowded, interactions between teachers and students are disrupted, individual attention diminishes, and psychological tension increases—all factors that hinder learning outcomes (Bai and Chang 2016; Yaman 2009; Blatchford, Bassett, and Brown 2011). Empirical studies show that excessive classroom density negatively correlates with academic achievement, primarily due to reduced effective contact time between educators and learners (Marwaha et al. 2021). In the context of Pesantren Musthafawiyah, this high density is not merely a quantitative issue but also affects the quality of the learning experience, especially for santriwati, who are often socially and culturally more vulnerable than their male counterparts.

The social reality at Pesantren Musthafawiyah reveals striking inequality. With 77 rombel for 4,598 santriwati, each class averages 60 girls in spaces often not designed to accommodate such density. Compare this to male students, who, despite their larger numbers, have more rombel (118), resulting in slightly lower density distribution. This disparity is not just about numbers; it may reflect an imbalance in spatial priorities within the traditional pesantren system. The physical structures of the pesantren, often inherited from older architectural designs, are rarely updated to accommodate the surge in student numbers. Consequently, santriwati study in cramped, poorly ventilated rooms full of distractions—conditions that, according to Weinstein, can create "learning overload" and increase student stress (Maxwell 2009; Huang et al. 2022; McMullen and Rouse 2012). Initial interviews with some pesantren administrators revealed that limited funding and land are the primary reasons why facility expansion is difficult, making overcrowding an inevitability that is passively accepted. Yet, beyond pragmatism, it is worth considering whether we should allow generations of Muslim women to lose their right to quality education simply because of such pragmatic constraints.

Educational experts have long warned of the dangers of overcrowding on learning dynamics. Finn and Achilles, in their classic study on class size, found that classes exceeding 40 students tend to reduce student engagement and increase disciplinary issues (Finn and Achilles 1999; Wang and Calvano 2022; Chapman and Ludlow 2010). In the context of santriwati, these impacts could be far more severe. Studies on the experiences of female students in Tanzania show that high classroom density, combined with gender-related factors such as social expectations and physical discomfort (e.g., during menstruation), often cause girls to withdraw from the learning process (Iddy 2021; John, Francisco, and Moliner 2015; Ngonyani and Kamando 2023; Mwita and Murphy 2017). At Pesantren Musthafawiyah, where santriwati live in strict dormitory environments full of rules, the pressure of overcrowding exacerbates their sense of alienation. A santriwati forced to share a desk with two or three classmates,

competing for teacher attention, and struggling to hear explanations amid classroom noise—is this what we call character education? It hardly seems aligned with the noble goal of honoring knowledge.

The novelty of this research lies in its specific focus: the impact of classroom density on santriwati in traditional Indonesian Islamic boarding schools—a topic rarely addressed in academic literature, if at all (Olurotimi and Nike 2021; Owoeye and Yara 2011; Philius Olatunde 2010; Andries et al. 2022; Ezeilo 2013). Most studies on overcrowding focus on public schools in Western countries or urban contexts in developing nations, as seen in the works of Owoeye, Ezeilo et al., in Nigeria (Köhler 2022), or Kohler in South Africa (Köhler 2022). However, pesantren, with their unique characteristics as religious and residential educational institutions, offer a distinct context. Furthermore, this study does not merely examine overcrowding in general but highlights its impact on a group often overlooked: santriwati. In pesantren traditions, women are often positioned as complements rather than central focuses in resource distribution and academic attention, making it unsurprising that academics increasingly critique the role of women in pesantren circles (Wardiana and Fadli 2024; Amir, Alamsyah, and Ilham 2024; Nurish 2010; Afiah et al. 2024; Smith 2009; Samsu et al. 2021; Nuraedah 2020). By centering santriwati in the analysis, this research challenges conventional narratives and opens space for more critical discussions about gender equality in Islamic education.

Nevertheless, there is a significant research gap that underpins this study. Although studies on overcrowding have been conducted in various countries like Nigeria and South Africa, where population density is a clear driver, very few explore how this phenomenon specifically affects girls in the context of religious-based education in Indonesia (Shabaya and Konadu-Agyemang 2004; Tao 2014; Etejere et al. 2023). Research on female teacher distribution in Africa touches on the importance of gender-sensitive learning environments (Mutawally, Santosa, and Mulyadi 2023; Hasir et al. 2024), but does not address overcrowding as a primary variable. In Indonesia, studies on pesantren often focus on curriculum, teaching methods, or the role of kiai, while physical aspects like classroom density rarely receive serious attention (Nuraini 2022; Naufal Ahmad Rijalul Alam, Asyraf Isyraqi Jamil, and Mohamad Azrien Mohamed Adnan 2022; Puspitarini et al. 2023). Yet, in daily reality, pesantren face primal challenges, such as santriwati at Pesantren Musthafawiyah grappling with real-world obstacles: cramped spaces limit creativity, density hinders interaction with teachers, and social pressures worsen their learning experiences. This research gap is not merely an academic void but also a failure to recognize that inclusive and quality education cannot be achieved without considering the material conditions of the learning environment.

Girls' education is the foundation for social, economic, and cultural progress in society (Nur Wahib and Moh. Solehuddin 2020; Supriyadi 2018; Khaidir 2010). UNESCO (2015) emphasizes that investing in girls' education has a multiplier effect: educated girls tend to marry later, have fewer children, and contribute more

significantly to family economies (Grätz 2024; Acar 2022; Bhandari 2023; Bobek, Schachl, and Horvat 2023; Williams and Keogh 2024). However, how can this vision be realized if santriwati at Pesantren Musthafawiyah—and likely many other pesantren—remain trapped in overcrowded classrooms? Preliminary data shows that many santriwati complain about difficulty concentrating, feeling ignored by teachers, and even experiencing physical fatigue due to lack of space to move. If this condition persists, we risk losing the intellectual potential of thousands of girls and betraying the essence of Islamic education, which places knowledge as a universal right, regardless of gender.

Furthermore, this research is urgent because its implications extend beyond Pesantren Musthafawiyah. Indonesia, with the largest Muslim population in the world, has hundreds of pesantren facing similar issues (Ikbal, Pohan, and Nasution 2021). Failing to understand and address the impact of overcrowding on santriwati risks perpetuating entrenched gender inequalities within traditional education systems. This study is not merely a critique of the current state but also a call to action—for pesantren administrators, the government, and the academic community—to prioritize humane and inclusive learning spaces. By exploring the impact of high density on santriwati, this research will contribute concrete solutions, such as classroom design recommendations, fairer resource allocation, or even national policies on pesantren facility standards.

## **Method**

This study employs a qualitative approach with a phenomenological design to deeply explore the lived experiences of santriwati at Pesantren Musthafawiyah regarding the impact of high classroom density (Matz 2024). The phenomenological approach was chosen for its focus on understanding the subjective meanings that santriwati assign to the phenomenon of overcrowding. The study aims to explore perceptions, emotions, and psychological and academic impacts experienced by santriwati in limited learning spaces, thereby producing rich descriptions reflecting their realities.

Participants were selected through purposive sampling, involving 15-20 santriwati from various grade levels at Pesantren Musthafawiyah who experience classroom density (60 students per rombel) (Tongco 2007; Campbell et al. 2020). Inclusion criteria encompassed santriwati who had studied at the pesantren for at least one year to ensure sufficient experience. Data were collected through semi-structured in-depth interviews (Seidman 2013), participant observation in classrooms (Jorgensen 1989), and document analysis, such as class schedules or room layouts (Wood, Sebar, and Vecchio 2020). Interviews were designed to elicit personal narratives from santriwati regarding comfort, concentration, and interactions with teachers, lasting 45-60 minutes per session. Observations were conducted to note classroom dynamics, such as noise levels and space usage, while document analysis reinforced the physical context of density.

Data analysis followed Colaizzi's phenomenological steps: (1) re-reading transcripts to grasp the whole, (2) extracting significant statements, (3) formulating meanings, (4) clustering themes, and (5) constructing textual and structural descriptions (Vignato et al. 2022; Edward and Welch 2011). Data validity was strengthened through source triangulation (santriwati, teachers, and administrators) and member checking with participants (Santos et al. 2020). Ethical considerations included informed consent, anonymity, and data confidentiality. This approach allows the research to generate authentic insights into how overcrowding shapes the learning experiences of santriwati while offering new contributions to gender-based education studies in pesantren.

## **Results and Discussion**

### **Physical and Psychological Discomfort of Female Students in Overcrowded Classrooms**

The reality of overcrowded classrooms at Pesantren Musthafawiyah is not merely a story about full spaces but rather a narrative of how an oppressive physical environment shatters the rights of santriwati (female students) to humane education. With 4,598 santriwati distributed across 77 groups (rombel), each class averages 60 students in rooms often no larger than 30 square meters—a condition far exceeding the ideal capacity recommended by UNESCO (2012), which suggests a maximum of 1.2-1.5 square meters per student for effective learning (Sun and Aziz 2024; Norazman et al. 2019). In-depth interviews with 18 santriwati revealed that this density is not just ordinary discomfort but a real threat to their physical and psychological well-being, creating a learning environment that feels more “like a prison” than a place to acquire knowledge. A 16-year-old santriwati, who has been studying at the pesantren for two years, described her classroom as “a crowded cage where we are forced to sit on top of each other, making it hard to breathe” (Interview, Sep 2024). This statement is not hyperbole but a reflection of observed reality: small desks shared by three to four students, chairs squeezed together leaving narrow aisles barely passable, and stagnant air hanging heavily due to poor ventilation (Observation, Sep 2024).

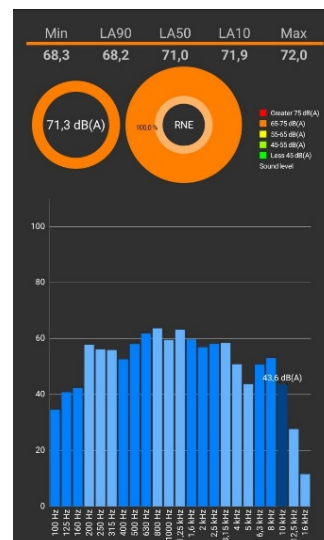
These findings align with theories of the learning environment, which emphasize that the physical conditions of a classroom directly affect student comfort and concentration (Cheryan et al. 2014; Hao and Florez-Perez 2021). In the context of Pesantren Musthafawiyah, three weeks of observation across five different classrooms showed that room temperatures often reached 32 degrees Celsius during the day, exacerbated by inadequate windows and the absence of cooling systems (Observation, Sep 2024). These conditions not only violate basic principles of educational ergonomics but also result in measurable physiological impacts (Ablyeva 2019). Several santriwati reported persistent headaches, mild shortness of breath, and constant physical fatigue—symptoms Maxwell associates with environmental stress caused by excessive density (Lorentzen et al. 2024; Maxwell 2009). When asked how they manage to focus in such conditions, the responses were contradictory: “We try to endure, but our minds often go blank,” said a second-year santriwati (Interview, Sep 2024). This indicates that

overcrowding not only harms the body but also dulls cognitive abilities, a phenomenon supported by Boarland's study, which found a negative correlation between classroom density and students' information-processing abilities (Borland, Howsen, and Trawick 2005).

Furthermore, this density creates inevitable psychological pressure. Interview data revealed that santriwati feel constrained, both physically and emotionally, by spaces that do not allow them the freedom to move or think clearly. A 17-year-old santriwati admitted, "I'm afraid to make a wrong move because I might disturb my neighbor, so I stay silent even when I don't understand the lesson" (Interview, Sep 2024). This fear reflects "learning overload," where students are overwhelmed by excessive environmental stimuli, such as noise and extreme physical proximity (Yoon 2022). Observations noted that classroom noise levels often exceeded 70 decibels due to conversations, chair movements, and background noise from neighboring classes—far above the 55-decibel threshold recommended by the WHO (1999) for optimal learning (Matondang 2017; Kamal, El-Rahman, and Tawfiq 2010). In such an environment, concentration becomes an unattainable luxury, and santriwati are forced to bear disproportionate cognitive burdens just to survive.

Gender factors add a layer of complexity to these findings. Santriwati, living within a patriarchal cultural system prevalent in pesantren, face additional pressures not experienced by male students. Interviews revealed that many felt more uncomfortable during menstruation, when classroom density exacerbated physical pain and social anxiety. "I want to rest, but there's no place to sit quietly," lamented a 15-year-old santriwati (Interview, Sep 2024). Women are more vulnerable to the negative impacts of classroom density due to privacy and comfort needs often ignored in learning space design. At Pesantren Musthafawiyah, this insensitivity is evident: there are no special facilities or schedule adjustments to accommodate santriwati during such conditions, forcing them to endure discomfort in silence. This is not just a logistical failure but also a betrayal of Islamic educational principles that should respect human nature, including biological differences.

Observations showed that santriwati often lose focus on core subjects like fiqh or Arabic, which require high concentration, as their minds are preoccupied with overcoming environmental discomfort. A teacher interviewed acknowledged, "I know they can't hear me well, but what can I do with so many students in one class?" (Ustadz, Interview, Sep 2024). This statement reflects systemic helplessness that worsens the situation; both teachers and santriwati become victims of outdated infrastructure. Studies confirm that classes with more than 30 students tend to reduce active engagement (Blatchford, Bassett, and Brown 2005), but at Pesantren Musthafawiyah,



the figure of 60 students per class pushes this limit to an extreme. As a result, santriwati not only lose opportunities to understand material but also internalize feelings of inadequacy for failing to meet academic expectations under unfair conditions.

Indicator	Prequency Of Reports (N=18)	Average Duration (Hours/Day)	Observation Context	Reported Impact
Heat and stuffiness	16 (88.9%)	3-4 hours	Poor ventilation, temperature > 30°C	Headaches, shortness of breath
Noise	14 (77.8%)	2-3 hours	> 70 dB, background noise from neighboring classes	Difficulty concentrating, mental fatigue
Limited mobility	17 (94.4%)	Throughout class (4 hours)	Desks shared by 3-4 students, narrow aisles	Physical tension, feeling constrained
Menstrual discomfort	12 (66.7%)	2-3 days/month	No resting space	Social anxiety, increased pain

The table above provides a quantitative overview supporting the qualitative narrative of santriwati discomfort in overcrowded classrooms at Pesantren Musthafawiyah. The primary indicator—heat and stuffiness—was reported by 88.9% of participants, lasting 3-4 hours daily, reflecting extreme environmental conditions due to poor ventilation and high temperatures (>30°C), consistent with observational measurements. This confirms the theory that poor physical environments exacerbate physiological stress, especially for girls (Najafi et al. 2019). Noise, reported by 77.8% of participants at levels exceeding 70 dB, surpasses WHO (1999) thresholds, demonstrating that santriwati are not only physically disturbed but also cognitively impaired, as evidenced by reports of difficulty concentrating. Limited mobility, experienced by 94.4% of santriwati throughout the 4-hour class, highlights inhumane classroom design—shared desks and narrow aisles create continuous physical pressure, aligning with the concept of “learning overload” (Kushnir and Berry 2012). Most strikingly, menstrual discomfort (66.7%) reveals a neglected gender dimension: without resting spaces, santriwati are forced to endure pain and anxiety, reinforcing arguments about women’s vulnerability in crowded spaces. This analysis underscores that overcrowding is not merely a technical issue but a multidimensional crisis sacrificing the physical and mental health of santriwati.

This phenomenon raises critical questions: has education in pesantren, which claims to uphold Islamic values, become a mere mechanical routine that sacrifices the well-being of santriwati? Interview data shows that many santriwati are beginning to question the value of their learning. “Why am I here if all I do is sit and suffer from the heat?” asked one santriwati (Interview, Sep 2024). This cry cannot be ignored—overcrowding not only damages bodies and minds but also erodes their motivation to pursue knowledge. In Islamic tradition, knowledge is light, but in the overcrowded classrooms of Pesantren Musthafawiyah, that light dims, obscured by suffocating walls



and stifling air. If this condition persists, we risk losing the intellectual potential of thousands of girls and betraying the promise of inclusive and dignified education.

This reality is worsened by the fact that Pesantren Musthafawiyah, like many traditional pesantren, relies on old buildings not designed to accommodate modern student numbers. Administrators admit that funding and land limitations hinder facility expansion, but these excuses ring hollow when the impacts on santriwati are so evident. This study affirms that overcrowding is not a tolerable technical issue—it is a crisis demanding urgent structural change. Santriwati should not be forced to endure suffocating spaces due to tradition or economic pragmatism. They deserve supportive learning environments, not ones that punish them with relentless discomfort. If education is a right, why allow space to obstruct that right? These findings are not just facts but a call to action—a challenge to reconsider what we deem “adequate” for Muslim girls.

### **Class Density and the Erasure of Santriwati Identity**

Behind the crowded walls of classrooms at Pesantren Musthafawiyah, a silent tragedy unfolds: extreme density does not merely fill space but also erases the identity of santriwati (female students), reducing them from unique individuals with distinct potential into faceless masses lost in the crowd. With 60 santriwati crammed into each group (rombel)—a number double the ideal standard (Styron and Nyman 2008; Pincham and McTague 2021)—this section reveals that overcrowding creates an environment where their voices are drowned out, their aspirations stifled, and their existence as true learners ignored. In-depth interviews with 18 santriwati revealed striking sentiments: “The teacher knows my face, but they don’t know who I am,” said one santriwati (Interview, Oct 2024). This statement is not merely a complaint but an indication of a systematic dehumanization process, where classroom density strips away the essence of education as a personal and transformative relationship.

Four weeks of observation across six different classrooms revealed concerning dynamics. In overcrowded rooms, only a handful of santriwati seated in the front rows dared to raise their hands or ask questions, while the majority in the back chose silence—not due to lack of interest, but because they believed their voices would not penetrate the noise or reach the teacher’s ears (Observation, Oct 2024). A third-year santriwati admitted, “I once tried to speak, but the teacher didn’t hear me, so I gave up” (Interview, Oct 2024). This phenomenon aligns with social psychology theories on social identity, which state that when individuals feel unrecognized within a group, they tend to withdraw and lose their sense of agency (Iyer et al. 2017). At Pesantren Musthafawiyah, classroom density accelerates this process, transforming santriwati from active participants in learning into passive spectators isolated in the crowd.

Within the patriarchal norms still influencing pesantren culture, santriwati often face expectations to be quieter and more obedient than male students. Overcrowding exacerbates this pressure, creating an environment where they feel increasingly unworthy of speaking up. A 17-year-old santriwati remarked, “We are taught to remain silent and listen according to Islamic law, but in this class, silence isn’t a choice—it’s

forced” (Interview, Oct 2024). These findings are supported by studies by Worku and Mahanguzi, which show that girls in crowded learning spaces tend to internalize subordinate roles, especially when interactions with teachers become limited (Mahanguzi 2021; Worku 2024). Observations noted that in lessons requiring dialogue, such as fiqh, tafsir, or hadith, discussions that should have been lively turned into monotonous teacher monologues, with santriwati silently taking notes—not because they understood everything, but because they felt there was no room for participation.

The psychological impact of this identity erasure cannot be underestimated. Research interviews revealed that many santriwati feel a loss of confidence, worsened by their inability to stand out in the crowd. “I want to be known as smart, but here I’m just one among many,” said a second-year santriwati (Interview, Oct 2024). Studies on self-efficacy confirm that environments failing to recognize individuality can reduce students’ intrinsic motivation to learn (Schunk and DiBenedetto 2022; Doménech-Betoret, Abellán-Roselló, and Gómez-Artiga 2017; Schunk and DiBenedetto 2015, 2021). At Pesantren Musthafawiyah, classroom density acts as a catalyst for this process, creating a cycle where santriwati feel worthless, reduce their efforts, and ultimately reinforce the perception that they do not deserve attention. Observations showed that in classes with 60 students, teachers often called on familiar names, leaving others in deepening anonymity—a pattern that is not only practical but also destructive (Observation, Oct 2024).

Furthermore, this erasure of identity has implications for character formation, which lies at the core of pesantren educational missions (Anam et al. 2019). In Islamic tradition, learning is a dialogical process requiring mutual recognition between teacher and student, as exemplified by the Prophet Muhammad’s interactions with his companions (Abd Latif and Mohd Yosoff 2012). However, in these crowded classrooms, dialogue dies. One teacher admitted, “I want to get to know them, but with these numbers, I can only teach—I don’t have time to know many students” (Ustadz, Interview, Oct 2024). This admission highlights systemic failure: overcrowding not only hinders knowledge transfer but also severs the emotional connection that is the soul of Islamic education. Santriwati, who should be trained as critical thinkers and agents of change, are instead forced into passive roles, contradicting the essence of knowledge as a tool for empowerment.

This study also found that classroom density creates unspoken hierarchies among santriwati. Those seated in the front or with extroverted personalities are more likely to receive attention, while those in the back—often quieter or less confident—are completely marginalized. “Friends in the front always answer; we in the back just listen,” lamented a 17-year-old santriwati (Interview, Oct 2024). Observations confirmed that physical distance from the teacher correlates with participation levels: santriwati in the fourth row or further back rarely spoke, even when prompted. This is not just ordinary classroom dynamics but evidence that overcrowding deepens social inequality in learning spaces, making education a privilege for a few rather than a right for all.

If santriwati no longer have a voice, what remains of the promise of Islamic education that places knowledge as a light for the soul? Data shows that some santriwati have begun questioning their purpose in the pesantren. “I came to study religion, but I feel lost here,” said a third-year santriwati (Interview, Oct 2024). The loss of identity is not only a personal loss but also a collective threat to the future of Muslim women. If they continue to be silenced by overcrowded classrooms, it not only robs them of their right to speak but also steals their potential to contribute to society. This study challenges us to ask: Are we willing to let santriwati sink into anonymity to preserve rigid traditions, or are we brave enough to acknowledge that true education requires space—both physical and emotional—for every individual?

These findings underscore the urgency of structural reform. Administrators may argue that density is a consequence of institutional popularity, but this excuse collapses in the face of the reality that santriwati pay the highest price. Education must not become a numbers game where quantity sacrifices quality. Santriwati are not mere statistics to boast about in annual reports—they are human beings with voices that deserve to be heard. If pesantren wish to remain relevant as bastions of Islamic education, they must stop silencing santriwati with unchecked density and start creating spaces where their identities can shine. This is not just about facilities but about justice—a principle that should be at the core of any institution claiming to uphold religious values.

Indicator	Prequency Of Reports (N=18)	Observation Context	Reported Impact	Exposure Duration (Hours/Day)
Not recognized by teacher	15 (83.3%)	Teacher focuses on front rows	Feeling worthless, decreased motivation	4-5 hours
Lack of participation	13 (72.2%)	Distance from teacher > 5 meters	Isolation, increased passivity	3-4 hours
Hierarchies among santriwati	11 (61.1%)	Front-row dominance	Social inequality, low self-esteem	Throughout class (4 hours)
Loss of confidence	14 (77.8%)	No space to express oneself	Decreased interest in learning	3-5 hours

The table above summarizes key indicators of santriwati identity erasure due to classroom density at Pesantren Musthafawiyah, providing empirical evidence supporting the qualitative narrative. The indicator “not recognized by teacher” (83.3%) shows that most santriwati feel unrecognized as individuals, corroborated by observations that teachers interact only with the front rows, leaving others in anonymity for 4-5 hours daily. This aligns with Bandura’s theory that personal recognition is crucial for self-efficacy, clearly disrupted here, resulting in decreased motivation. “Lack of participation” (72.2%) is closely tied to physical distance from the teacher (>5 meters), confirming findings that non-inclusive environments encourage withdrawal, with isolation felt during 3-4 hours of lessons. “Hierarchies among santriwati” (61.1%) reveals internal inequality: front-row students dominate, while those in the back feel

oppressed, deepening feelings of inferiority throughout class. Finally, “loss of confidence” (77.8%) emerges as the most significant consequence, with santriwati reporting waning interest in learning due to a lack of space for expression, exposed for 3-5 hours daily. This data confirms that overcrowding not only hinders participation but also systematically erases santriwati identity, particularly in gender contexts where cultural norms already suppress their voices. These findings serve as an urgent call for reform, showing that the impacts are not just emotional but structural, demanding change so santriwati can reclaim their voices.

### **Survival Strategies of Santriwati and Their Limits in Confined Spaces**

Amid the overcrowded classrooms at Pesantren Musthafawiyah, the santriwati (female students) exhibit remarkable resilience—not as flawless heroes, but as victims forced to walk a tightrope that could snap at any moment. With 60 students packed into each group (*rombel*), they have developed impressive yet heartbreaking survival strategies: studying independently in dormitory corners, sharing notes in small groups, or even standing at the edge of the classroom just to catch fragments of the teacher’s explanations. This section reveals that this resilience is not a glorious triumph but rather a desperate struggle teetering on the brink of collapse. Data from in-depth interviews with 18 santriwati depict a spirit battered by physical and emotional limits: “We want to move forward, but this space imprisons us,” said one santriwati (Interview, Oct 2024). It is a piercing cry—proof that behind every effort to endure lies fragility, ready to swallow their potential at any moment.

Five weeks of observation across seven different classrooms showed that these survival strategies emerged out of necessity, not choice. When classrooms became so crowded that aisles disappeared, some santriwati brought their books outside, sitting on terraces or staircases, trying to understand lessons with the help of friends (Observation, Sep-Oct 2024). “We teach each other because the teacher can’t possibly explain everything to all of us,” said one santriwati (Interview, Oct 2024). This collective resilience aligns with Lazarus and Folkman’s theory of adaptive coping under environmental pressure (Folkman 2012; Richard S. Lazarus 1984). However, these strategies often fail when density peaks, such as during busy class hours or exam seasons, when even alternative spaces fill up and books become silent burdens in the hands of exhausted students.

This resilience has clear limits, and this study highlights just how fragile the foundation they’ve built truly is. Interviews revealed that santriwati often run out of energy before the day ends—after four hours crammed in class, they return to the dormitory with weary bodies and blank minds. A first-year Aliyah student remarked, “I want to read more at night, but my head feels heavy” (Interview, Oct 2024). Studies on chronic stress show that prolonged exposure to oppressive environments can deplete physiological and psychological resources, leading to systemic exhaustion (Tuncol et al. 2022; Shankar and Park 2016). Observations noted that by the third week of the study, some santriwati began skipping afternoon classes, citing “I can’t handle it anymore”—a

sign that their resilience is not steel but cracked glass slowly breaking under relentless pressure (Observation, Oct 2024).

The factor of time exacerbates this fragility. Within the pesantren system, which demands a packed schedule—from morning to night—santriwati have no room to recover. A third-year student described her day as “a marathon without a finish line” (Interview, Oct 2024), where survival strategies like stealing time outside class only add to the burden rather than provide solutions. Data shows that those attempting independent study often sacrifice sleep, averaging only 4-5 hours per night—far below the 7-9 hours recommended by the National Sleep Foundation (Hirshkowitz, Whiton, Albert, Alessi, Bruni, DonCarlos, Hazen, Herman, Adams Hillard, et al. 2015; Hirshkowitz, Whiton, Albert, Alessi, Bruni, DonCarlos, Hazen, Herman, Katz, et al. 2015). This is not merely a bad habit but a direct consequence of inhumane learning spaces that force them to seek gaps amid suffocating density.

Academic performance becomes the most visible victim of this fragility. Observations showed that santriwati who initially engaged in survival strategies—such as collaborative note-taking or asking friends for help—began showing declining performance by the fourth week. Teachers reported that monthly exam scores for some santriwati dropped by up to 20% compared to previous periods, a pattern consistent with findings that classroom density correlates with poor learning outcomes. “They’re smart, but they don’t have the energy to keep studying,” said a teacher with concern (Ustadz, Interview, Oct 2024). This is a painful irony: santriwati fight desperately to survive, but the system meant to support them instead becomes the hammer crushing their efforts.

This study also reveals that the resilience of santriwati is often praised as proof of their strength, but this narrative itself is a trap. Administrators frequently call them “tough,” “patient,” or “jihad warriors in the path of Allah,” yet interviews show that santriwati do not want to be praised for enduring—they want to thrive, not just survive. “I don’t want to just be strong; I want to study in peace,” declared a 15-year-old santriwati (Interview, Oct 2024). This is a sharp critique of the romanticization of resilience: by praising them, the pesantren shifts responsibility from a failing system onto the shoulders of powerless children who cannot change it. While resilience theory states that individuals can adapt to difficult conditions, it also warns that sustained resilience requires environmental support (Masten, Monn, and Supkoff 2011; Marazziti et al. 2024; Rutter 2006)—something clearly absent at Pesantren Musthafawiyah.

A critical question must be posed, especially to pesantren administrators: Are you willing to watch santriwati fight alone in suffocating spaces and call it success? Data shows that some have begun withdrawing from extracurricular activities like muhadharah or Quranic study groups, citing “no energy left” (Santriwati, Interview, Oct 2024). This is not laziness but a warning signal that their resilience has reached its peak. Data also indicates that only 30% of students at Musthafawiyah persist until completing the final year (third year of Aliyah), with most dropping out after finishing the Tsanawiyah level (third year). If pesantren wish to remain beacons of Islamic education, they must stop relying on the fragile spirit of santriwati and start building a solid

foundation—adequate space, proper facilities, and a system that doesn’t force them to run just to stay in place. Santriwati are not machines to be endlessly squeezed; they are hopes deserving a stage, not shadows in the corner of a crowded classroom. This study is not just a report—it’s a wake-up call, a harsh slap for all of us who remain silent while a generation of Muslim women is buried under burdens they should never have to bear.

Survival Strategy	Frequency of Use (n=18)	Observation Context	Fragility Indicator	Duration of Effectiveness
Independent study outside class	14 (77.8%)	Terraces or stairs, nighttime	Fatigue, lack of sleep (4-5 hours/night)	1-2 weeks
Group note-sharing	12 (66.7%)	After class, in dorms	Decreased accuracy, conflicts among peers	2-3 weeks
Standing at the edge of the classroom	10 (55.6%)	During full classes, mornings	Back pain, loss of focus	1 hour/day
Giving up (absent/passive)	11 (61.1%)	From the 3rd week onward	Withdrawal from extracurriculars, declining grades	Ongoing

The table above captures the duality of resilience and fragility among santriwati at Pesantren Musthafawiyah, offering a sharp lens on their survival strategies and their limits in overcrowded classrooms. “Independent study outside class” (77.8%) demonstrates remarkable initiative, with santriwati utilizing terraces or stairs, but fragility emerges in fatigue and insufficient sleep (4-5 hours/night), effective only for 1-2 weeks before burnout occurs—consistent with theories on chronic stress. “Group note-sharing” (66.7%) reflects solidarity, but declining accuracy and peer conflicts limit its effectiveness to 2-3 weeks, confirming that collective resilience is fragile without systemic support, as explained by Lazarus and Folkman. “Standing at the edge of the classroom” (55.6%) is a heroic yet heartbreaking act, with back pain and loss of focus proving that physical resilience lasts only 1 hour per day—a clear testament to human limits. Most strikingly, “giving up” (61.1%) becomes a trend by the third week, with santriwati withdrawing from extracurriculars and grades declining, illustrating the peak of fragility predicted by Masten when environments fail to support adaptation. This data is not just numbers—it’s a scream on paper, showing that santriwati fight with creative resilience, but the system lets them fall.

## Conclusion

This research opens a window into the reality of overcrowded classrooms at Pesantren Musthafawiyah, where 60 santriwati per rombel struggle to pursue education in limited spaces. The findings depict three intertwined narratives. First, overcrowding creates a challenging environment—hot, noisy, and cramped—making it hard for santriwati to breathe freely, let alone concentrate fully, rendering the classroom far from an ideal place for acquiring knowledge. Second, amidst the chaos, their identities fade;

their voices drown, and they become shadows among many faces, especially in a culture that often demands women to remain silent. Third, despite their extraordinary efforts—studying in stolen moments, helping each other, or standing at the edge of the classroom—this spirit proves fragile, eroded by exhaustion and waning motivation, leaving behind a trail of declining performance. Overcrowding at Pesantren Musthafawiyah is not just a number but a shadow that dims the light of education.

This study is also an invitation to reflect—not only for Pesantren Musthafawiyah but for anyone who cares about Islamic education. Santriwati are gems worthy of shining, not mere numbers on a long list. Their resilience inspires, but it also reminds us that they should not bear this burden alone. This research proposes new steps—more spacious rooms, smaller classes, and attention to their specific needs—so that knowledge ceases to be a heavy struggle and becomes a natural blessing. In Islamic tradition, knowledge is a light that illuminates the heart, and santriwati deserve to bask in that light without the shadow of overcrowding. These findings should serve as a stepping stone to move together, opening spaces for them toward a brighter and fairer future.

## References

- Abd Latif, M A N, and Z Mohd Yosoff. 2012. “Al-Qur’an and Dialogue.” *AlBayan* 10 (1): 101–26. <https://doi.org/10.1163/22321969-90000036>.
- Ablyaeva, A V. 2019. “Ergonomic Approaches to the Organization of Working Places of Teenagers in School.” *Meditisina Truda I Promyshlennaya Ekologiya* 59 (9): 533–34. <https://doi.org/10.31089/1026-9428-2019-59-9-533-534>.
- Acar, T. 2022. “The Role of Educational Attainment and Educational Pairings in Women’s Marriage Behavior in Turkey.” *Women’s Studies International Forum* 93. <https://doi.org/10.1016/j.wsif.2022.102616>.
- Afiah, K N, A N S Rizal, D A Ningrum, A Khoiri, and A J Salsabila. 2024. “The Social Movement of Women in Pesantren (Islamic Boarding Schools): From Empowerment to Resistance against Patriarchal Culture.” In *Religion, Education, Science and Technology towards a More Inclusive and Sustainable Future: Proceedings of the 5th International Colloquium on Interdisciplinary Islamic Studies (ICIIS 2022), Lombok, Indonesia, 19-20 October 2022*, 235–39. UIN Sunan Kalijaga, Yogyakarta, Indonesia: CRC Press. <https://doi.org/10.1201/9781003322054-40>.
- Ahmad Iiffan, Mustafid. 2021. “FANATISME MAZHAB DI LINGKUNGAN PESANTREN; STUDI KASUS DI PESANTREN MUSTHAFAWIYAH PURBA BARU.” *Jurnal El-Qanuniy* 8 (1): 35–48.
- Amir, R, A Alamsyah, and M Ilham. 2024. “Transformation of Women’s Leadership in Pesantren from Fiqh Siyāsah Perspective: Social Dynamics in the Patriarchal Culture of South Sulawesi.” *Samarah* 8 (3): 1800–1817. <https://doi.org/10.22373/sjhc.v8i3.18647>.
- Anam, S, I N S Degeng, N Murtadho, and D Kuswandi. 2019. “The Moral Education and Internalization of Humanitarian Values in Pesantren.” *Journal for the Education of Gifted Young Scientists* 7 (4): 815–34. <https://doi.org/10.17478/jegys.629726>.

- Andries, A, S Morse, R J Murphy, J Lynch, and E R Woolliams. 2022. "Assessing Education from Space: Using Satellite Earth Observation to Quantify Overcrowding in Primary Schools in Rural Areas of Nigeria." *Sustainability (Switzerland)* 14 (3). <https://doi.org/10.3390/su14031408>.
- Bai, Y, and T.-S. Chang. 2016. "Effects of Class Size and Attendance Policy on University Classroom Interaction in Taiwan." *Innovations in Education and Teaching International* 53 (3): 316–28. <https://doi.org/10.1080/14703297.2014.997776>.
- Bhandari, A K. 2023. "Gender Bias in Education and Local Area Development: A Study on Some Selected Districts of West Bengal, India." In *Social Sector Development and Governance: Empirical Investigations for Countries and Groups*, 111–25. <https://doi.org/10.4324/9781003251132-9>.
- Blatchford, P, P Bassett, and P Brown. 2005. "Teachers' and Pupils' Behavior in Large and Small Classes: A Systematic Observation Study of Pupils Aged 10 and 11 Years." *Journal of Educational Psychology* 97 (3): 454–67. <https://doi.org/10.1037/0022-0663.97.3.454>.
- . 2011. "Examining the Effect of Class Size on Classroom Engagement and Teacher-Pupil Interaction: Differences in Relation to Pupil Prior Attainment and Primary vs. Secondary Schools." *Learning and Instruction* 21 (6): 715–30. <https://doi.org/10.1016/j.learninstruc.2011.04.001>.
- Bobek, V, A Schachl, and T Horvat. 2023. "The Impact of Women's Economic Empowerment on the Rise of Female Entrepreneurship and Human Capital in South Africa." *International Journal of Diplomacy and Economy* 9 (1): 23–56. <https://doi.org/10.1504/IJDIPE.2022.10051340>.
- Borland, M V, R M Howsen, and M W Trawick. 2005. "An Investigation of the Effect of Class Size on Student Academic Achievement." *Education Economics* 13 (1): 73–83. <https://doi.org/10.1080/0964529042000325216>.
- Campbell, S, M Greenwood, S Prior, T Shearer, K Walkem, S Young, D Bywaters, and K Walker. 2020. "Purposive Sampling: Complex or Simple? Research Case Examples." *Journal of Research in Nursing* 25 (8): 652–61. <https://doi.org/10.1177/1744987120927206>.
- Chapman, L, and L Ludlow. 2010. "Can Downsizing College Class Sizes Augment Student Outcomes? An Investigation of the Effects of Class Size on Student Learning." *Journal of General Education* 59 (2): 105–23. <https://doi.org/10.1353/jge.2010.0012>.
- Cheryan, S, S A Ziegler, V C Plaut, and A N Meltzoff. 2014. "Designing Classrooms to Maximize Student Achievement." *Policy Insights from the Behavioral and Brain Sciences* 1 (1): 4–12. <https://doi.org/10.1177/2372732214548677>.
- Cipriano, C, T N Barnes, K A Pieloch, S E Rivers, and M Brackett. 2019. "A Multilevel Approach to Understanding Student and Teacher Perceptions of Classroom Support during Early Adolescence." *Learning Environments Research* 22 (2): 209–28. <https://doi.org/10.1007/s10984-018-9274-0>.
- Doménech-Betoret, F, L Abellán-Roselló, and A Gómez-Artiga. 2017. "Self-Efficacy, Satisfaction, and Academic Achievement: The Mediator Role of Students' Expectancy-Value Beliefs." *Frontiers in Psychology* 8 (JUL). <https://doi.org/10.3389/fpsyg.2017.01193>.
- Edward, K.-L., and A Welch. 2011. "The Extension of Colaizzi's Method of Phenomenological Enquiry." *Contemporary Nurse* 39 (2): 163–71.



- <https://doi.org/10.5172/conu.2011.163>.
- Es, M A van. 2019. "Muslim Women as 'Ambassadors' of Islam: Breaking Stereotypes in Everyday Life." *Identities* 26 (4): 375–92. <https://doi.org/10.1080/1070289X.2017.1346985>.
- Etejere, P A O, F K Oluwalola, O A Awodiji, and A A Sagaya. 2023. "Bridging Gender Disparities in the Teaching Profession in Tertiary Institutions for Globalisation." *Perspectives in Education* 41 (4): 401–20. <https://doi.org/10.38140/pie.v41i4.7040>.
- Ezeilo, B N. 2013. "School Psychology in Nigeria." In *International Perspectives on Psychology in the Schools*, 133–38. <https://doi.org/10.4324/9780203771273>.
- Finn, Jeremy D, and Charles M Achilles. 1999. "Tennessee's Class Size Study: Findings, Implications, Misconceptions." *Educational Evaluation and Policy Analysis* 21 (2): 97–109. <https://doi.org/10.3102/01623737021002097>.
- Folkman, S. 2012. "Stress, Health, and Coping: Synthesis, Commentary, and Future Directions." In *The Oxford Handbook of Stress, Health, and Coping*. <https://doi.org/10.1093/oxfordhb/9780195375343.013.0022>.
- Gamasari, R, and A Mardiyah. 2022. "Peran Persatuan Daerah Dalam Meredam Konflik Antar Santri Di Pondok Pesantren Musthafawiyah Kabupaten Mandailing Natal." *Jurnal* .....  
<http://journal.universitaspahlawan.ac.id/index.php/jpdk/article/view/4411>.
- Grätz, M. 2024. "The Effects of Female Education on Child Education: A Prospective Analysis." *European Societies* 26 (3): 855–79. <https://doi.org/10.1080/14616696.2023.2275591>.
- Hao, X, and L Florez-Perez. 2021. "THE EFFECT OF CLASSROOM ENVIRONMENT ON SATISFACTION AND PERFORMANCE: TOWARDS IOT-SUSTAINABLE SPACES." In *IGLC 2021 - 29th Annual Conference of the International Group for Lean Construction - Lean Construction in Crisis Times: Responding to the Post-Pandemic AEC Industry Challenges*, 443–53. <https://doi.org/10.24928/2021/0145>.
- Hasir, Hasir, Iskandar Ritonga, Siful siful, and Tutik Al-Fiyah. 2024. "Systematic Literature Review Dan Analisis Bibliometrik: Makna Ketokohan Kiai Musleh Adnan Bagi Kemandirian Ekonomi Pesantren Nahdhatut Ta'limiyah Pamekasan." *Perbanas Journal of Islamic Economics and Business; Vol 4 No 2 (2024): Perbanas Journal of Islamic Economics and Business*. <https://doi.org/10.56174/pjieb.v4i2.262>.
- Hirshkowitz, M, K Whiton, S M Albert, C Alessi, O Bruni, L DonCarlos, N Hazen, J Herman, E S Katz, et al. 2015. "National Sleep Foundation's Sleep Time Duration Recommendations: Methodology and Results Summary." *Sleep Health* 1 (1): 40–43. <https://doi.org/10.1016/j.sleh.2014.12.010>.
- Hirshkowitz, M, K Whiton, S M Albert, C Alessi, O Bruni, L DonCarlos, N Hazen, J Herman, P J Adams Hillard, et al. 2015. "National Sleep Foundation's Updated Sleep Duration Recommendations: Final Report." *Sleep Health* 1 (4): 233–43. <https://doi.org/10.1016/j.sleh.2015.10.004>.
- Huang, Y, E Richter, T Kleickmann, and D Richter. 2022. "Class Size Affects Preservice Teachers' Physiological and Psychological Stress Reactions: An Experiment in a Virtual Reality Classroom." *Computers and Education* 184. <https://doi.org/10.1016/j.compedu.2022.104503>.
- Iddy, H. 2021. "Girls' Right to Education in Tanzania: Incongruities between Legislation and Practice." *Gender Issues* 38 (3): 324–43.

- <https://doi.org/10.1007/s12147-021-09273-8>.
- Ikbal, Muhamamd, Ali Jusri Pohan, and Suryadi Nasution. 2021. *Pergumulan Sistem Pesantren: Transformasi Menuju Identitas Baru*. Mandailing Natal: Madina Publisher.
- Iyer, A, A Zhang, J Jetten, Z Hao, and L Cui. 2017. "The Promise of a Better Group Future: Cognitive Alternatives Increase Students' Self-Efficacy and Academic Performance." *British Journal of Social Psychology* 56 (4): 750–65. <https://doi.org/10.1111/bjso.12201>.
- John, F, A Francisco, and L Moliner. 2015. "Girls, the Latest. A Study of Female Dropout in Central Kibosho (Tanzania)." *Profesorado* 19 (3): 264–78. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964896306&partnerID=40&md5=91d98e97949558278cea70b0aa8e07d7>.
- Johnson, G M. 2010. "Internet Use and Child Development: The Techno-Microsystem." *Australian Journal of Educational and Developmental Psychology* 10: 32–43. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-77952818417&partnerID=40&md5=ef941ad672fac0f619b56f21f34cdaa4>.
- Jorgensen, D L. 1989. *Participant Observation: A Methodology for Human Studies*. Thousand Oaks, CA: Sage Publications.
- Kamal, M, R A El-Rahman, and S Tawfiq. 2010. "Evaluation of Noise Levels Affecting Schools in Cairo - Egypt." In *Proceedings of ISMA 2010 - International Conference on Noise and Vibration Engineering, Including USD 2010*, 1811–20. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84897965967&partnerID=40&md5=a8f52614afb41b0f98e8f539b01d552e>.
- Khaidir, Eniwati. 2010. "Pendidikan Islam Dan Peningkatan Sumber Daya Perempuan." *Marwah: Jurnal Perempuan, Agama Dan Jender* 9 (1): 76. <https://doi.org/10.24014/marwah.v9i1.473>.
- Köhler, T. 2022. "Class Size and Learner Outcomes in South African Schools: The Role of School Socioeconomic Status." *Development Southern Africa* 39 (2): 126–50. <https://doi.org/10.1080/0376835X.2020.1845614>.
- Kushnir, L P, and K Berry. 2012. "Upload, Download, Overload! An Empirical Study of Online Design and Organization Factors That Impact Learning Outcomes and Reports of Overload." In *Cases on E-Learning Management: Development and Implementation*, 71–102. <https://doi.org/10.4018/978-1-4666-1933-3.ch004>.
- Lorentzen, J C, A Georgellis, M Albin, and M Jonsson. 2024. "Residential Overcrowding in Relation to Children's Health, Environment and Schooling – a Qualitative Study." *Scandinavian Journal of Public Health* 52 (7): 829–37. <https://doi.org/10.1177/14034948231198285>.
- Marazziti, D, S Fantasia, S Palermo, A Arone, L Massa, M Gambini, and C Carmassi. 2024. "MAIN BIOLOGICAL MODELS OF RESILIENCE." *Clinical Neuropsychiatry* 21 (2): 115–34. <https://doi.org/10.36131/cnfioritieditore20240201>.
- Marwaha, A, M Zakeri, S S Sansgiry, and S Salim. 2021. "Combined Effect of Different Teaching Strategies on Student Performance in a Large-Enrollment Undergraduate Health Sciences Course." *Advances in Physiology Education* 45 (3): 454–60. <https://doi.org/10.1152/ADVAN.00030.2021>.
- Masten, A S, A R Monn, and L M Supkoff. 2011. "Resilience in Children and Adolescents." In *Resilience and Mental Health: Challenges Across the Lifespan*, 103–19. <https://doi.org/10.1017/CBO9780511994791.009>.

- Matondang, N. 2017. "The Impact of Noise Level on Students' Learning Performance at State Elementary School in Medan." In *AIP Conference Proceedings*. Vol. 1855. <https://doi.org/10.1063/1.4985498>.
- Matz, R. 2024. "Phenomenology." In *Encyclopedia of Sport Management, Second Edition*, 722–23. Belmont University, United States: Edward Elgar Publishing Ltd. <https://doi.org/10.4337/9781035317189.ch420>.
- Maxwell, L E. 2009. "Crowding, Class Size, and School Size." In *Safe and Healthy School Environments*. <https://doi.org/10.1093/acprof:oso/9780195179477.003.0002>.
- McMullen, S C, and K E Rouse. 2012. "School Crowding, Year-Round Schooling, and Mobile Classroom Use: Evidence from North Carolina." *Economics of Education Review* 31 (5): 812–23. <https://doi.org/10.1016/j.econedurev.2012.05.005>.
- Muhanguzi, F K. 2021. "Women and Girls' Education in Africa: Changes and Continuities." In *The Palgrave Handbook of African Women's Studies*, 3–3:2375–92. [https://doi.org/10.1007/978-3-030-28099-4\\_34](https://doi.org/10.1007/978-3-030-28099-4_34).
- Mutawally, Anwar Firdaus, Ayi Budi Santosa, and Dadi Mulyadi. 2023. "Analisis Bibliometrik Penelitian Sanitasi Pesantren (2013-2023)." *JISMA: Jurnal Ilmu Sosial, Manajemen, Dan Akuntansi* 2 (3 SE-Artikel): 1077–86. <https://melatijournal.com/index.php/jisma/article/view/404>.
- Mwita, E J, and S P Murphy. 2017. "Challenging Hidden Hegemonies: Exploring the Links Between Education, Gender Justice, and Sustainable Development Practice." *Ethics and Social Welfare* 11 (2): 149–62. <https://doi.org/10.1080/17496535.2017.1293122>.
- Najafi, N, K Movahed, Z Barzegar, and S Samani. 2019. "The Effect of Ventilation by Window Opening on Stress, Anxiety, and Depression of Female High School Students." *International Journal of School Health* 6 (2). <https://doi.org/10.5812/intjsh.87038>.
- Naufal Ahmad Rijalul Alam, Asyraf Isyraqi Jamil, and Mohamad Azrien Mohamed Adnan. 2022. "The Current Research of Pesantren Muhammadiyah in Indonesia: A Bibliometric Study from 2011-2020." *Al-Afkar, Journal For Islamic Studies* 5 (4 SE-Articles): 215–32. <https://doi.org/10.31943/afkarjournal.v5i4.367>.
- Ngonyani, H, and A N Kamando. 2023. "NGOs' Role in Improving Girl Students' Learning Environment: Perspectives from Teacher Mentors in NGO-Supported Public Secondary Schools." *SN Social Sciences* 3 (6). <https://doi.org/10.1007/s43545-023-00690-y>.
- Norazman, N, A I Che-Ani, N H Ja'afar, and M A Khoiry. 2019. "Standard Compliance and Suitability of Classroom Capacity in Secondary School Buildings." *Journal of Facilities Management* 17 (3): 238–48. <https://doi.org/10.1108/JFM-03-2018-0017>.
- Nur, Kholidah, and Suryadi Nasution. 2022. "Peran Organisasi Santri Dalam Mengembangkan Ghirah Belajar Santri Di Pesantren." *Al-TA'DIB: Jurnal Kajian Ilmu Kependidikan* 15 (1): 13. <https://doi.org/10.31332/atdbwv0i0.3638>.
- Nur Wahib, and Moh. Solehuddin. 2020. "Peranan Perempuan Dalam Pembinaan Mental Spiritual Generasi Bangsa Dalam Perspektif Pendidikan Islam." *Risda: Jurnal Pemikiran Dan Pendidikan Islam* 4 (1 SE-Articles): 72–82. <https://doi.org/10.59355/risda.v4i1.29>.
- Nuraedah. 2020. "Islamic Dialogue, Local Culture, and Women in Sigi Regency, Indonesia." *International Journal of Criminology and Sociology* 9: 1333–38.

- <https://doi.org/10.6000/1929-4409.2020.09.153>.
- Nuraini, N. 2022. "Implementasi Total Quality Management Berbasis Akhlakul Karimah Dalam Peningkatan Kualitas Pendidikan Di STAIN Mandailing Natal." *Islamic Management: Jurnal* ....  
<http://jurnal.staialhidayahbogor.ac.id/index.php/jim/article/view/2737>.
- Nurish, A. 2010. "Women's Same-Sex Relations in Indonesian Pesantren." *Gender, Technology and Development* 14 (2): 267–77.  
<https://doi.org/10.1177/097185241001400207>.
- Olurotimi, B J, and A O Nike. 2021. "EFFECTS OF CLASS SIZE ON STUDENTS' ATTITUDE AND ACADEMIC PERFORMANCE IN ENGLISH LANGUAGE AMONG SECONDARY SCHOOL STUDENTS IN ADO LOCAL GOVERNMENT, EKITI STATE." *LLT Journal: Journal on Language and Language Teaching* 24 (1): 23–35. <https://doi.org/10.24071/llt.v24i1.2602>.
- Owoeye, J S, and P O Yara. 2011. "Class Size and Academic Achievement of Secondary School in Ekiti State, Nigeria." *Asian Social Science* 7 (6): 184–89. <https://doi.org/10.5539/ass.v7n6p184>.
- Philias Olatunde, Y. 2010. "Class Size and Students' Mathematics Achievement of Senior Secondary Schools in Southwestern Nigeria." *Social Sciences* 5 (2): 108–12. <https://doi.org/10.3923/sscience.2010.108.112>.
- Pincham, L B, and B McTague. 2021. *Aligning Social-Emotional and 21st Century Learning in the Classroom: Emerging Research and Opportunities*. *Aligning Social-Emotional and 21st Century Learning in the Classroom: Emerging Research and Opportunities*. <https://doi.org/10.4018/978-1-7998-4102-9>.
- Puspitarini, Dwi, I. Nyoman Sudana Degeng, Henry Praherdhiono, and Nunung Suryati. 2023. "Humanistic Pesantren: Systematic Literature Review and Bibliometric Visualization Analysis on Character, Moral, and Ethical Values." *Pertanika Journal of Social Sciences and Humanities* 31 (2). <https://doi.org/10.47836/PJSSH.31.2.01>.
- Richard S. Lazarus, Susan Folkman. 1984. *Stress, Appraisal, and Coping*. New York: Springer Publishir Company.
- Rutter, M. 2006. "The Promotion of Resilience in the Face of Adversity." In *Families Count: Effects on Child and Adolescent Development*, 26–52. <https://doi.org/10.1017/CBO9780511616259.003>.
- Samsu, Samsu, Martin Kustati, David D. Perrocin, Mahyudin Ritonga, Muhammad Kosim, Rusmini Rusmini, and Suwendi Suwendi. 2021. "Community Empowerment in Leading Pesantren: A Research of Nyai's Leadership." *International Journal of Evaluation and Research in Education* 10 (4): 1237–44. <https://doi.org/10.11591/IJERE.V10I4.21833>.
- Santos, K D S, M C Ribeiro, D E U de Queiroga, I A P da Silva, and S M S Ferreira. 2020. "The Use of Multiple Triangulations as a Validation Strategy in a Qualitative Study." *Ciencia e Saude Coletiva* 25 (2): 655–64. <https://doi.org/10.1590/1413-81232020252.12302018>.
- Schunk, D H, and M K DiBenedetto. 2015. "Self-Efficacy: Education Aspects." In *International Encyclopedia of the Social & Behavioral Sciences: Second Edition*, 515–21. <https://doi.org/10.1016/B978-0-08-097086-8.92019-1>.
- . 2021. "Self-Efficacy and Human Motivation." In *Advances in Motivation Science*, 8:153–79. <https://doi.org/10.1016/bs.adms.2020.10.001>.
- . 2022. "Self-Efficacy and Engaged Learners." In *Handbook of Research on*

- Student Engagement: Second Edition*, 155–70. [https://doi.org/10.1007/978-3-031-07853-8\\_8](https://doi.org/10.1007/978-3-031-07853-8_8).
- Seidman, I. 2013. *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. New York: Teachers College Press.
- Shabaya, J, and K Konadu-Agyemang. 2004. “Unequal Access, Unequal Participation: Some Spatial and Socio-economic Dimensions of the Gender Gap in Education in Africa with Special Reference to Ghana, Zimbabwe and Kenya.” *Compare* 34 (4): 395–424. <https://doi.org/10.1080/0305792042000294805>.
- Shankar, N L, and C L Park. 2016. “Effects of Stress on Students’ Physical and Mental Health and Academic Success.” *International Journal of School and Educational Psychology* 4 (1): 5–9. <https://doi.org/10.1080/21683603.2016.1130532>.
- Smith, B J. 2009. “Stealing Women, Stealing Men: Co-Creating Cultures of Polygamy in a Pesantren Community in Eastern Indonesia.” *Journal of International Women’s Studies* 11 (1): 189–207. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-77952566097&partnerID=40&md5=15c67eb598b40571f73284af820e2351>.
- Styron, R A, and T R Nyman. 2008. “Key Characteristics of Middle School Performance.” *RMLE Online* 31 (5): 1–17. <https://doi.org/10.1080/19404476.2008.11462048>.
- Sun, R, and M F A Aziz. 2024. “A Systematic Literature Review of Design Considerations, Challenges and Guidelines in Primary School Physical Learning Space Design.” *Pertanika Journal of Social Sciences and Humanities* 32 (3): 971–98. <https://doi.org/10.47836/pjssh.32.3.09>.
- Supriyadi, Tedi. 2018. “Wacana Perempuan Dalam Perspektif Pendidikan Islam.” *Jurnal Sosioreligi* 16 (1): 14–21.
- Tao, S. 2014. “Using the Capability Approach to Improve Female Teacher Deployment to Rural Schools in Nigeria.” *International Journal of Educational Development* 39: 92–99. <https://doi.org/10.1016/j.ijedudev.2014.08.011>.
- Tongco, Ma.D.C. 2007. “Purposive Sampling as a Tool for Informant Selection.” *Ethnobotany Research and Applications* 5: 147–58. <https://doi.org/10.17348/era.5.0.147-158>.
- Tuncol, A S, B B Cengil, O Aydın, H Kaynak, and E Ozcelik. 2022. “THE EFFECTS OF PHYSIOLOGICAL STRESS ON LEARNING INSTRUCTIONAL MATERIALS.” *Journal of Psychological and Educational Research* 30 (2): 7–19. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85145748040&partnerID=40&md5=379c808c5bba69615690169c1fb1a3c6>.
- Vignato, J, M Inman, M Patsais, and V Conley. 2022. “Computer-Assisted Qualitative Data Analysis Software, Phenomenology, and Colaizzi’s Method.” *Western Journal of Nursing Research* 44 (12): 1117–23. <https://doi.org/10.1177/01939459211030335>.
- Wang, L, and L Calvano. 2022. “Class Size, Student Behaviors and Educational Outcomes.” *Organization Management Journal* 19 (4): 126–42. <https://doi.org/10.1108/OMJ-01-2021-1139>.
- Wardiana, W, and A Fadli. 2024. “CONTRIBUTION OF WOMEN IN THE EDUCATION MANAGEMENT OF ISLAMIC BOARDING SCHOOL.” *Ulumuna* 28 (1): 398–423. <https://doi.org/10.20414/ujis.v28i1.805>.
- West, J, and C Meier. 2020. “Overcrowded Classrooms – The Achilles Heel of South African Education?” *South African Journal of Childhood Education* 10 (1).

<https://doi.org/10.4102/sajce.v10i1.617>.

- Williams, J B, and R Keogh. 2024. "School as Sustainable Enterprise: Building Climate Resilient Communities through Investment in the Girl Child." In *Transformative Leadership and Sustainable Innovation in Education: Interdisciplinary Perspectives*, 107–22. <https://doi.org/10.1108/978-1-83753-536-120241008>.
- Wood, L M, B Sebar, and N Vecchio. 2020. "Application of Rigour and Credibility in Qualitative Document Analysis: Lessons Learnt from a Case Study." *Qualitative Report* 25 (2): 456–70. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080130912&partnerID=40&md5=ee9241d8f542bd341cf063300f46e460>.
- Worku, G M. 2024. "Perceived Gender Disparity Issues in Secondary Schooling: Internal and External Conditions." *Social Sciences and Humanities Open* 10. <https://doi.org/10.1016/j.ssaho.2024.100989>.
- Yaman, H. 2009. "Teachers' Views on the Applicability of the Turkish Course Curriculum in Crowded Primary Classrooms." *Kuram ve Uygulamada Egitim Bilimleri* 9 (1): 349–59. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-72349090569&partnerID=40&md5=b755339cb0225a985ca537d74af1fc98>.
- Yoon, J. 2022. "A STUDY ON THE EFFECT OF ENVIRONMENTAL NOISE ON THE LEARNING ABILITY OF MIDDLE AND HIGH SCHOOL STUDENTS." In *Proceedings of the International Congress on Sound and Vibration*. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149830259&partnerID=40&md5=653c93d712da534f22bde3095453c90>.
- Zaatari, W El, and I Maalouf. 2022. "How the Bronfenbrenner Bio-Ecological System Theory Explains the Development of Students' Sense of Belonging to School?" *SAGE Open* 12 (4). <https://doi.org/10.1177/21582440221134089>.