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FROM THE EDITOR

Dear esteemed readers,

It is our great pleasure to present Volume 4, Issue 1 (March 2026) of our journal. With each new issue, we continue to strengthen our commitment to advancing scholarly dialogue in the field of well-being, a multidisciplinary domain whose growing relevance is increasingly recognized across academic, professional, and social contexts. As we move forward in our publication journey, we remain dedicated to sustaining our role as an international platform that fosters rigorous research, intellectual exchange, and collaborative inquiry.

This issue brings together six valuable contributions authored by scholars from seven different countries, Australia, Canada, Indonesia, Afghanistan, Nigeria, North Cyprus, and the United States, reflecting the global and inclusive perspective that our journal strives to maintain. The diversity of geographical contexts, methodological approaches, and thematic orientations represented in this issue highlights the richness of contemporary well-being research and underscores the importance of cross-cultural scholarly engagement. The articles featured in this issue address well-being from a variety of innovative perspectives. They explore integrative therapeutic approaches, psychological resilience among parents of children with special needs, digital family interaction and migrant student well-being, the relationship between digital kindness and mental health, and the role of shared recreational experiences in adolescent well-being. In addition, the review article examines artificial intelligence and teacher well-being through the theoretical lens of the Job Demands–Resources Model, contributing to ongoing discussions about technology's evolving role in educational contexts. Collectively, these studies offer both theoretical insights and practical implications, enriching the literature through methodological diversity and conceptual depth.

As always, we emphasize the importance of maintaining high standards of academic integrity, methodological rigor, and ethical responsibility in all submissions. We also continue to encourage authors to support transparency and accessibility in scholarly communication, including the use of researcher identifiers such as ORCID. The advancement of knowledge depends upon constructive peer review, respectful scholarly dialogue, and the collective efforts of researchers, reviewers, editors, and readers alike. Our journal remains committed to supporting this collaborative academic ecosystem. I would like to express my sincere appreciation to all contributors who made this issue possible-authors, reviewers, editorial board members, section editors, language editors, and technical staff-whose dedication and professionalism sustain the quality and impact of our publication.We warmly invite researchers, practitioners, and scholars interested in well-being studies to continue contributing their valuable work to our journal. We hope that this issue provides stimulating insights and inspires further research in this vital field.

Wishing you an engaging and rewarding reading experience.

With best regards,

Prof. Dr. Çağla GÜR

Editor-in-Chief

EDİTÖRDEN

Saygıdeğer okurlar,

Dergimizin 4. Cilt, 1. Sayısını (Mart 2026) sizlerle buluşturmaktan büyük mutluluk duymaktayız. Her yeni sayıyla birlikte, akademik, mesleki ve toplumsal alanlarda giderek artan önemi kabul gören çok disiplinli bir alan olan iyi oluş konusundaki bilimsel diyaloğu geliştirme kararlılığımızı sürdürmekteyiz. Yayın hayatımızda ilerledikçe, titiz araştırmaları, entelektüel paylaşımı ve iş birlikçi bilimsel üretimi destekleyen uluslararası bir platform olma misyonumuzu güçlendirmeye devam ediyoruz.

Bu sayımızda Avustralya, Kanada, Endonezya, Afganistan, Nijerya, KKTC ve Amerika Birleşik Devletleri olmak üzere yedi farklı ülkeden araştırmacıların katkılarıyla hazırlanan altı değerli çalışma yer almaktadır. Farklı coğrafi bağlamları, yöntemsel yaklaşımları ve tematik yönelimleri bir araya getiren bu çeşitlilik, güncel iyi oluş araştırmalarının zenginliğini ortaya koymakta ve kültürlerarası akademik etkileşimin önemini vurgulamaktadır. Bu sayıda yer alan makaleler, iyi oluşu yenilikçi bakış açılarıyla ele almaktadır. Çalışmalar; bütüncül terapötik yaklaşımları, özel gereksinimli çocukların ebeveynlerinde psikolojik dayanıklılığı, dijital aile etkileşimi ile göçmen öğrencilerin iyi oluşunu, dijital nezaket ile ruh sağlığı arasındaki ilişkiyi ve ergen iyi oluşunda paylaşılan rekreasyonel etkinliklerin rolünü incelemektedir. Ayrıca inceleme makalesi, Yapay Zekâ ile öğretmen iyi oluşu konusunu İş Talepleri-Kaynaklar Modeli kuramsal çerçevesi üzerinden ele alarak, teknolojinin eğitim bağlamındaki değişen rolüne ilişkin güncel tartışmalara katkı sunmaktadır. Bu çalışmaların tümü, kuramsal derinlikleri ve yöntemsel çeşitlilikleriyle alanyazına önemli katkılar sağlamaktadır.

Her zaman olduğu gibi, tüm gönderilerde akademik dürüstlük, yöntemsel titizlik ve etik sorumluluk ilkelerinin korunmasının önemini vurgulamaktayız. Ayrıca bilimsel iletişimde şeffaflık ve erişilebilirliği desteklemek amacıyla, araştırmacı tanımlayıcıları (ORCID gibi) kullanımını teşvik etmeyi sürdürmekteyiz. Bilginin ilerlemesi; yapıcı hakemlik süreçlerine, saygılı akademik tartışmalara ve araştırmacı, hakem, editör ile okurların ortak çabalarına bağlıdır. Dergimiz bu iş birlikçi akademik ekosistemin etkin bir parçası olma kararlılığını sürdürmektedir. Bu sayının hazırlanmasına katkı sunan tüm paydaşlara-yazarlar, hakemler, editör kurulu üyeleri, alan editörleri, dil editörleri ve teknik ekip-özverili çalışmaları ve profesyonel katkıları için içten teşekkürlerimi sunarım. İyi oluş alanına ilgi duyan tüm araştırmacıları ve akademisyenleri dergimize değerli çalışmalarıyla katkı sunmaya davet ediyor; bu sayının sizlere ilham verici ve verimli bir okuma deneyimi sunmasını diliyorum.

Saygılarımla,

Prof. Dr. Çağla GÜR

Baş Editör

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Evaluating the IDEA Framework: An Integrative Approach to Enhancing Well-Being via Yoga, Meditation, Bilateral Stimulation, and Hypnotherapy

IDEA Çerçevesinin Değerlendirilmesi: Yoga, Meditasyon, Bilateral Uyarım ve Hipnoterapi Yoluyla İyi Oluşu Geliştirmeye Yönelik Bütüncül Bir Yaklaşım

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Abstract

This study explores the impact of the IDEA Framework with a Yoga-Based Psycho-Neuro-Somatic Therapy (YPNST) workshop created to increase self-esteem, safety, and emotional stability, as well as psychological safety. The study is grounded in integrative mind-body approaches for mental health. The framework combines yoga, meditation, bilateral stimulation, and hypnotherapy to promote resilience and well-being. This research investigates how integrative interventions with the IDEA Framework can foster well-being. A mixed-methods design was employed, with twelve adult participants completing pre- and post-intervention assessments, including the Rosenberg Self-Esteem Scale, safety and stability questionnaires, and open-ended reflections. Quantitative analyses using Wilcoxon signed-rank tests revealed statistically significant improvements in key areas of self-esteem, self-confidence, and perceived safety. Specifically, participants reported greater satisfaction with themselves, increased recognition of personal strengths, and stronger coping mechanisms, alongside enhanced feelings of groundedness and emotional security. Complementing these results, thematic qualitative analysis highlighted participants' increased body awareness, trust, and positive self-perceptions, often expressed through both psychological insights and physical sensations such as relaxation, openness, and calmness. Findings suggest that multimodal, body-centered practices may effectively enhance self-worth and emotional security, highlighting their potential as accessible tools for promoting mental well-being in a variety of settings. Limitations include the small sample size, underscoring the need for further research to validate and expand upon these preliminary results. Implications suggest that the IDEA Framework may provide an accessible, structured model for integrating diverse modalities into counselling, wellness, and community-based settings, with further research needed to validate long-term and large-scale outcomes.

Keywords: Bilateral Stimulation, Positive Psychology, Holistic Well-being, IDEA Framework, Yoga-Based Psycho-Neuro-Somatic Therapy (YPNST)

Öz

Bu çalışma, özsaygıyı, güvenlik duygusunu, duygusal istikrarı ve psikolojik güvenliği artırmak amacıyla oluşturulan Yoga Tabanlı Psiko-Nöro-Somatik Terapi (YPNST) atölyesiyle birlikte geliştirilen IDEA Çerçevesi'nin etkisini incelemektedir. Çalışma, zihinsel sağlık alanında bütünleştirici zihin-beden yaklaşımlarına dayanmaktadır. Bu çerçeve; dayanıklılığı ve iyi oluşu desteklemek için yoga, meditasyon, iki taraflı uyarım ve hipnoterapiyi bir araya getirmektedir. Bu araştırma, IDEA Çerçevesi kapsamında uygulanan bütünleştirici müdahalelerin iyi oluşu nasıl destekleyebileceğini incelemektedir. Karma yöntemli bir araştırma tasarımı kullanılmış; on iki yetişkin katılımcı, Rosenberg Özsaygı Ölçeği, güvenlik ve istikrar anketleri ile açık uçlu yansıtma sorularından oluşan müdahale öncesi ve sonrası değerlendirmeleri tamamlamıştır. Wilcoxon işaretli sıralar testi kullanılarak yapılan nicel analizler, özsaygı, özgüven ve algılanan güvenlik gibi temel alanlarda istatistiksel olarak anlamlı gelişmeler ortaya koymuştur. Katılımcılar, kendilerinden daha fazla memnuniyet duyduklarını, kişisel güçlü yönlerinin farkına vardıklarını, daha güçlü başa çıkma mekanizmaları geliştirdiklerini ve artan topraklanmışlık ile duygusal güvenlik hissettiklerini bildirmişlerdir. Bu sonuçları tamamlayan tematik nitel analiz, katılımcıların artan beden farkındalığını, güven duygusunu ve genellikle hem psikolojik içgörüler hem de rahatlama, açıklık ve sakinlik gibi fiziksel duyumlarla ifade edilen olumlu öz algılarını ortaya koymuştur. Bulgular, çok boyutlu ve beden merkezli uygulamaların özdeğeri ve duygusal güvenliği etkili biçimde artırabileceğini, ayrıca çeşitli ortamlarda zihinsel iyi oluşu desteklemek için erişilebilir araçlar olarak önemli bir potansiyele sahip olduklarını göstermektedir. Sınırlılıklar arasında küçük örneklem boyutu yer almakta olup, bu durum elde edilen ön sonuçların doğrulanması ve genişletilmesi için daha fazla araştırmaya ihtiyaç olduğunu göstermektedir. Bulgular, IDEA Çerçevesi'nin danışmanlık, sağlık ve toplum temelli ortamlarda farklı yöntemleri bütünleştiren erişilebilir ve yapılandırılmış bir model sağlayabileceğini, ancak uzun vadeli ve geniş ölçekli sonuçları doğrulamak için ileri çalışmalara ihtiyaç duyulduğunu ortaya koymaktadır.

Anahtar Kelimeler: İkili Uyarım, Pozitif Psikoloji, Bütünsel İyi Oluş, IDEA Çerçevesi, Yoga Tabanlı Psiko-Nöro-Somatik Terapi (YPNST)

Introduction

There has been increasing recognition of how physical, psychological, and emotional well-being are deeply interconnected over the years. This awareness serves as a prelude to growing curiosity about holistic mind-body approaches to mental health and resilience (Johnson & Lee, 2023; Sharma et al., 2025; Stynes et al., 2022). Among these approaches, interventions and practices such as yoga, mindfulness meditation, bilateral stimulation (used in therapies like EMDR), and hypnotherapy have gained significant popularity and attention. They are increasingly incorporated into therapeutic settings, reflecting a movement toward integrating cognitive and somatic healing within a unified model (Kabat-Zinn, 2013). These approaches are believed to help reduce stress, regulate emotions, and promote psychological safety. Research also indicates that holistic, mind-body practices can improve self-esteem, foster emotional resilience, and create a sense of safety and stability (Johnson & Lee, 2023; Kabat-Zinn, 2003; Kuhfuß et al., 2021; Sharma et al., 2025; Stynes et al., 2022).

From progressive findings in favor of these interventions, it is clearly understood that there is a growing acceptance of layering approaches due to their empirical support and holistic efficacy for mental health care (Goyal et al., 2014; Johnson & Lee, 2023; Sharma et al., 2025). According to empirical studies, yoga and mindfulness meditation have been demonstrated to diminish anxiety and depressive symptomatology. They also improve the regulation of emotions (Goyal et al., 2014). Bilateral stimulation in EMDR therapy is widely regarded as effective in resourcing feelings of self-soothing and for processing traumatic memories (Shapiro, 2018). Hypnotherapy employs subconscious activities to provide wider avenues for behavior modification in a stress-relieving manner (Linden et al., 2024). Thus, altogether, they manifest the potential of this healing modality, which is the combination of physical movement, attentional shift, and neuro-somatic techniques, within a comprehensive healing framework.

The trend toward multimodal therapy reflects a shift toward holistic mental health care. Effective practitioners increasingly use yoga, mindfulness, bilateral stimulation, and hypnotherapy to address different aspects of well-being. Integration promotes psychological resilience and emotional stability in the IDEA Framework. Yoga regulates and grounds the nervous system, while hypnotherapy boosts self-esteem and reduces stress. Layering these practices helps clients learn self-regulation, emotional processing, and self-care, which leads to more lasting and meaningful results (Johnson & Lee, 2023; Sharma et al., 2025). Mindfulness reduces anxiety and stress, improves mood, body awareness, and coping mechanisms, according to new research (Stynes et al., 2022). These studies support integrative approaches like the IDEA Framework for self-esteem and holistic well-being.

These new findings suggest that psychomotor therapies such as bilateral stimulation and hypnotherapy would complement these outcomes. These approaches specifically operate through the neural pathways used for self-regulation and emotional stability (Saj & Mete, 2025). Thus, operational structuring of traditional and contemporary modalities emphasize the need for a framework that organizes and integrates divergent practices in a systematic and research-informed way. Though encouraging theoretical indications have appeared for the potential benefits of multimodal body-centered interventions (Saj & Mete, 2025), a considerable gap exists in terms of empirical research on the benefits of combined interventions. Literature has discussed yoga, meditation, bilateral stimulation, and hypnotherapy in impacting self-esteem and safety (Creswell & Lindsay, 2014). This study proposes to address this gap with the IDEA Framework.

The identification of issues, therapeutic approaches, progress, and outcomes forms this structured model. The inquiry explored in the Yoga-Based Psycho-Neuro-Somatic Therapy (YPNST) workshop is layering modalities for boosting self-esteem and emotional security.

Research Significance

The research bridges a significant gap in understanding the impact of integrative mind-body therapies by applying the IDEA Framework in a Yoga-Based Psycho-Neuro-Somatic Therapy (YPNST) workshop. The novelty of the research lays in applying the IDEA Framework as a structured, stepwise, and multimodal model that integrates yoga, meditation, bilateral stimulation, and hypnotherapy into a single therapeutic approach. This approach addresses a gap, as many individuals continue to study these modalities independently, with a lack of studies examining the combined effects of these intervention measures. The IDEA Framework, therefore, makes a fresh contribution by offering a systematic method for layering multiple therapeutic practices to enhance self-esteem and perceptions of safety. This study, which employs a mixed-methods design involving both quantitative and qualitative techniques, aims to illuminate the potential of an integrative mind-body practice for psychological safety and resilience and overall wellness improvement.

Based on empirical studies of healing modalities, the IDEA framework advances these through the sequence: identify the presenting issue, determine the appropriate therapeutic sequence, evaluate progress through the intervention, and assess outcomes post-intervention. It aims to maximize therapeutic outcomes through a combination of movement, emotion, and nervous system regulation. Lasting tools for self-regulation and resilience are given to the participants. The IDEA framework, in a practical manner, can be seen in Figure 1: the four significant steps are: (I) Identify the presenting issues, for example, self-esteem and sense of safety; (D) Determine the appropriate therapeutic approach and sequence of modalities-like meditation, bilateral stimulation, yoga, and clinical hypnotherapy; (E) Evaluate progress throughout the intervention; (A) Assess the outcomes by using post-intervention measures.

The value of the IDEA Framework lies in its structured approach to the mindful integration of modalities, enhancing the overall effectiveness of the intervention. For this study, the framework was utilized to support therapeutic outcomes, specifically by layering modalities such as yoga, bilateral stimulation, and hypnotherapy during the YPNST workshop. The effects on self-esteem and feelings of safety and stability were measured before and after the intervention. The following question guides the research:

Does the IDEA Framework, integrating yoga, psychotherapy, neurotherapy, and somatic therapy, enhance self-worth and emotional security in participants?

Consequently, the following hypotheses are proposed:

- H1 (Alternative Hypothesis): The IDEA Framework will significantly enhance participants' self-worth and emotional security.

- H0 (Null Hypothesis): There will be no significant difference between pretest and posttest scores, indicating that the IDEA Framework does not enhance self-worth or emotional security.

This study makes an important contribution by introducing and testing the IDEA Framework as an innovative model for layered therapeutic practice. The findings have implications for counselling, wellness, and mental health fields, as they demonstrate how structured integration of yoga, meditation, bilateral stimulation, and hypnotherapy can deepen therapeutic outcomes, provide lasting self-regulation tools, and address existing gaps in the literature on multimodal interventions.

Model in Action: IDEA Framework

Figure 1. The IDEA Framework: A Multimodal Model

The IDEA Framework: Components of the Integrative Approach

The IDEA Framework combines several research-based modalities, including yoga, meditation, bilateral stimulation, and hypnotherapy, into a structured therapeutic process. Each component is discussed individually, yet all are interlinked, demonstrating how they complement one another within the framework.

Yoga Integration in Therapy

Yoga, derived from the Sanskrit meaning “to yoke” or “to unite,” envisions the unification of body, mind, and spirit (Satchidananda, 2012). The IDEA framework is a step-by-step mechanism that includes four steps: Identify, Determine, Evaluate, and Assess. It forms a pathway to accommodate varied therapeutic modalities, including yoga, to foster holistic well-being. Kamradt (2017) explained yoga’s primary aim is to cultivate a sense of wholeness through practices such as physical postures (asanas), breathwork (pranayama), and meditation (dhyana). These practices support developing the client's inner experience and increase self-awareness and confidence. Broderick and Vancampfort (2017) describe yoga as involving “physical postures and breathing exercises to create balance between mind and body," thereby aiding in stabilizing the nervous system and providing a sense of safety. This type of stabilization serves as a platform for self-esteem and confidence to flourish, as clients begin to learn how to regulate their emotions within a safe context.

Research reviews, such as O’Shea et al. (2021), demonstrate that yoga acts as a beneficial adjunct to other therapeutic modalities, supporting clients’ emotional regulation and resilience which are key aspects of well-being. Bhide et al. (2023) highlight yoga’s versatility in addressing mental health, as it can facilitate behavioural change, improve thought patterns, and foster personal growth and self-awareness. These outcomes directly contribute to increasing clients’ feelings of safety, confidence, and self-esteem, as evidenced by the YPNST workshop findings, which show that the IDEA framework has potential to help clients access and release stored emotions, leading to greater emotional stability and self-trust (Sneed, 2017).

Furthermore, integrating yoga into psychotherapy has been shown to reduce symptoms of anxiety and depression (Butera & Kreatsoulas, 2018; Childs□Fegredo et al., 2023; Larocque & Moreau, 2020). This supports the successful outcome of the IDEA framework by empowering clients with self-regulation tools that reinforce their sense of safety and stabilization.

In line with the IDEA Framework and the structure of the YPNST Workshop, the Yoga-Integrated Health Neuroscience Paradigm (YOGIHANSAM) was developed by Ramanujapuram (2018) to illustrate how yoga can be effectively combined with modern neuroscience. Ramanujapuram (2018)'s approach aimed to deepen the understanding of how these practices support both mental and physical health. This integrated model complements the IDEA framework by offering a scientific foundation that helps clients connect with their physiological responses, develop self-regulation strategies, express their inner experiences, and apply these techniques for sustained healing (Ramanujapuram, 2018). Yoga has the potential to enhance self-esteem, confidence, safety, and stabilization which makes it an excellent modality for supporting comprehensive mental health care (O'Shea et al., 2021; Ramanujapuram, 2018). Although yoga as a therapeutic intervention may not be appropriate for everyone, incorporating it as a layer in the IDEA framework adds a valuable dimension to mind-body wellness in the multi-modal therapeutic approach.

Incorporating Bilateral Stimulation into Therapeutic Practice

Within the scope of the IDEA framework and its integration of diverse modalities alongside yoga, bilateral stimulation (BLS) was also utilized as a therapeutic strategy to support healing processes. BLS plays a vital role within this model and the broader IDEA approach, given its proven capacity to complement various therapeutic techniques, as supported by current empirical research (Amano & Toichi, 2016; Blackwood, 2024; Shapiro, 2018). Research indicates that bilateral stimulation significantly influences the nervous system by promoting calmness, enhancing emotional regulation, and contributing to overall mental health (Shapiro, 2018; Blackwood, 2024; Amano & Toichi, 2016). These findings highlight the importance of integrating BLS as a flexible tool for building resilience and emotional stability across different therapeutic contexts.

Primarily associated with Eye Movement Desensitization and Reprocessing (EMDR) therapy, BLS is employed to aid resource development and facilitate the desensitization and reprocessing of traumatic or emotionally intense memories (Shapiro, 2018). While eye movements are most commonly emphasized, BLS also includes various forms of bilateral stimuli such as physical tapping, auditory tones, and rhythmic bilateral movements that activate both hemispheres of the brain simultaneously (Blackwood, 2024). A frequently used method involves physical tapping, alternately tapping on different body areas like the thighs, palms, or hands, to stimulate bilateral neural pathways (Amano & Toichi, 2016; Burback et al., 2024; Javinsky et al., 2024). These bilateral actions engage both sides of the body concurrently, leading to neurophysiological benefits such as improved emotional regulation and decreased physiological stress responses (Amano & Toichi, 2016). As a resource-building technique, BLS functions as a calming mechanism that can promote self-soothing, foster feelings of safety, and help regulate a dysregulated nervous system (Shapiro, 2001). Empirical evidence supports its effectiveness in enhancing emotional resilience, reducing the intensity of traumatic memories, and alleviating symptoms related to stress and anxiety (Shapiro, 2018; Lee & Cuijpers, 2013). Beyond trauma-specific applications, BLS is increasingly used to address various mental health issues, including anxiety and depression, and can be integrated with

other modalities such as yoga to reinforce positive affirmations, cultivate a sense of security, and promote calmness in clients (Blackwood, 2024; Rodriguez de Behrends, 2021). The research supported that the inclusion of BLS within the IDEA framework in the YPNST workshop has the potential to be a useful healing process and is another valuable layer for an integrated approach to mind-body well-being.

Incorporating Hypnotherapy into Therapeutic Practice

Within the IDEA framework, hypnotherapy is recognized as a useful modality for layering with other therapeutic practices, such as yoga, meditation, and bilateral stimulation. Its inclusion enhances the integrative mind-body approach to well-being by addressing subconscious processes, facilitating deep relaxation, and promoting behavioural change (Ruswadi et al., 2025).

With the process of hypnotherapy, individuals are guided into a state of deep relaxation and focused attention, allowing access to the subconscious mind while achieving heightened states of concentration (Linden et al., 2024). In this receptive state, therapists can deliver positive suggestions, affirmations, or post-hypnotic cues tailored to support goals such as reducing anxiety, enhancing self-esteem, or processing traumatic memories (Orenstein, 2018).

Hypnotherapy effectively promotes regulation of the nervous system by activating the parasympathetic branch, which encourages relaxation and stress reduction (Linden et al., 2024, Milling, 2023).

In the context of the Yoga-Based Psycho-Neuro-Somatic Therapy (YPNST) workshop, hypnotherapy has been shown to be effective in fostering self-esteem, confidence, and feelings of safety. Hypnotherapy can assist in accessing conscious and subconscious core beliefs, and patterns that influence self-esteem and self-perception. By reinforcing positive imagery and affirmations that can enhance self-trust and internal safety, hypnotherapy can support a sense of vulnerability to safety and resilience (Linden et al., 2024). Another key aspect of hypnotherapy is its ability to stimulate the parasympathetic nervous system through deep relaxation, thereby decreasing physiological stress (Leo et al., 2024). This process fosters a sense of calm and stability, which are essential for emotional regulation and the integration of insights (Linden et al., 2024; Milling, 2023). Research suggests that the inclusion of hypnotherapy within the IDEA framework within the YPNST workshop is another layer worth looking into for its potential for facilitating a body and mind sense of well-being.

Methodology

Research Participants and Recruitment Procedure

This study used a purposive sampling approach to examine the effects of the IDEA Framework (Saj & Mete, 2025) through a YPNST workshop. The workshop combined yoga, psychotherapy, neurotherapy, and somatic therapy to improve participants' self-worth and emotional security. A null hypothesis was established stating that there would be no difference between pre-test and post-test means. Both qualitative and quantitative data were analyzed to evaluate changes between the pre-test and post-test. For the quantitative data, a paired sample t-test (also known as a dependent t-test) was employed to compare pre-test and post-test scores. The test assessed whether there is a statistically significant difference after the workshop. This study was approved by the Research Ethics Board of Yorkville University, and no changes were made to the study design, hypotheses, or analyses after approval. Participants were recruited via indirect advertising through social media platforms, specifically Instagram and Facebook.

The study utilized digital posts and advertisements providing information about the free YPNST program offered at a local fitness studio in collaboration with Yorkville University. Inclusion criteria mandated that participants:

1. Be residents of the area,
2. Be aged 19 years or older,
3. Be proficient in reading and writing in English, and
4. Possess reliable internet access via a computer or smartphone.

Exclusion criteria, based on the Physical Activity Readiness Questionnaire Plus (PAR-Q+), aimed to ensure participant physical safety by disqualifying individuals with severe health conditions that would have a health professional contraindicate gentle yoga participation. Additionally, non-English speakers, individuals who are blind, and deaf individuals were excluded due to communication and technological limitations.

Interested individuals registered through a social media application. They first completed the pre-screening PAR-Q+ questionnaire and were then emailed workshop instructions. Eligible participants attended the in-person workshop on April 13, 2025.

At the beginning of the session, the researcher verbally reviewed informed consent and confidentiality limits with all participants. The pre-study questionnaire was also explained and read aloud. Participants were given sufficient time to review the consent forms and questionnaires and were reminded that they could withdraw at any stage without penalty. In total, twelve (12) participants enrolled in the study. All attended the intervention session and completed both the pre- and post-study questionnaires. There were no dropouts and no missing data. The IDEA Framework YPNST workshop lasted 90 minutes. It consisted of a 60-minute integrative practice followed by closing activities. The structured sequence included:

- A 15-minute mindfulness meditation incorporating bilateral tapping (bilateral stimulation),
- A 30-minute gentle yoga practice emphasizing empowerment, grounding, and strength-building postures, and
- A 15-minute guided savasana (resting pose) with hypnotherapy aimed at fostering self-esteem and emotional stability.

Data Collection Procedures

Data collection involved both quantitative and qualitative measures, conducted in sequential phases. Collecting both forms of data enabled a more comprehensive understanding of participants' experiences. Pre-intervention assessments included standardized questionnaires, such as the Rosenberg Self-Esteem Scale, as well as open-ended questions on self-esteem, confidence, safety, and security. Participants were given 30 minutes to complete the pre-screening assessment before the YPNST workshop. Immediately after the session, participants completed a follow-up questionnaire. This assessment was identical in structure to the pre-test and captured changes in self-esteem, perceptions of safety, and emotional well-being. Participants were again given 30 minutes to complete the post-screening assessment after the workshop.

Measures

The following three measures were utilized: The Rosenberg Self-Esteem Scale (RSES), along with scaling questions on confidence and safety and stability. The Rosenberg Self-Esteem Scale is one of the most widely used instruments for measuring global self-esteem, or a person's overall evaluation of their worth or value. It was developed by Morris Rosenberg in 1965 and its purpose to assess global self-worth by measuring both positive and negative feelings about oneself. The 10 item questionnaire features five positive worded items such as "On the whole, I am satisfied with myself" and five negatively worded items such as "I feel I do not have much to be proud of." Respondents use a 4 point Likert scale featuring Strongly Agree, Agree, Disagree, and Strongly Disagree and are scored from 0 to 3. The negatively worded items are reverse-scored. Generally higher scores are indicative of higher self-esteem and scores under 15 are correlated with low self-esteem. Scores range from 0 to 30 (Gnambs et al., 2018). The Rosenberg Self-Esteem Scale (RSES) is widely recognized as a valid and reliable measure of self-esteem (Rosenberg, 1965). It demonstrated strong psychometric properties and is widely validated across cultures and languages (Schmitt & Allik, 2005). It is commonly used in psychological research and clinical assessment.

The authors developed scaling questions to determine confidence, safety and stabilization. Scaling questions based on a Likert scale have been shown to quantify experiences and emotions within research (Sarantankos, 1998).

- **Scaling Question on Confidence**

There was one (1) question ("On a scale from 1 to 10, how confident do you feel about yourself"), rated from 1 (not confident) to 10 (very confident) .

- **Scaling Questions on Safety and Stability**

There were 8 scaling questions (e.g., "I feel safe in my current environment") rater from 1= *strongly disagree* to 5= *strongly agree*. The higher scores for these questions reflected a higher level of perceived safety.

Statistical Analyses

The main hypothesis of this research study is that the IDEA Framework, integrating yoga, psychotherapy, neurotherapy, and somatic therapy, would enhance participants' self-worth and emotional security during the YPNST workshop. The null hypothesis states that there would be no significant differences between pre- and post-test means, indicating no measurable effect of the intervention.

Both qualitative and quantitative data were analyzed to examine changes between pre- and post-test assessments. For quantitative data, paired comparisons were conducted using Wilcoxon signed-rank tests, which are appropriate for small sample sizes and ordinal data. The significance threshold was set at $p < 0.05$. Effect sizes were not calculated; however, they are recommended for future studies.

Quantitative data analysis involved both descriptive and inferential statistics. Descriptive statistics included means, medians, and standard deviations for pre- and post-intervention scores on the Rosenberg Self-Esteem Scale and Safety/Stability measures. Data cleaning procedures involved checking for missing values and inconsistencies.

Qualitative data were drawn from open-ended responses. These were transcribed and analyzed using NVivo software. Saldaña (2009)'s coding framework guided the thematic analysis, enabling the identification of emergent themes related to participants' perceptions of self-esteem, safety, and emotional well-being.

Results

Summary of Results Quantitative Findings

Self-Esteem

Significant improvements were observed in self-esteem scores following the post-intervention. As shown in Table 1, items reflecting overall satisfaction with oneself ($p = 0.046$), recognition of sound qualities ($p = 0.025$), ability to do as well as others ($p = 0.011$), and maintaining a positive attitude toward oneself ($p = 0.034$) were significant. These results indicate that participants developed greater satisfaction with themselves, recognized personal strengths, and maintained a more positive self-view after the workshop.

Self-Confidence

In addition to global self-esteem, participants reported significantly higher self-confidence in Table 2. The Wilcoxon Signed Ranks Test revealed a substantial improvement ($p = .002$), suggesting that the workshop fostered not only self-esteem but also confidence in one's abilities. These findings support the hypothesis that the IDEA Framework effectively enhanced participants' feelings of self-worth and confidence.

Safety and Stability

Participants in Table 3 demonstrated significant gains in perceptions of stability and emotional safety. Notable improvements were found in feeling grounded ($p = 0.010$), expressing emotions comfortably ($p = 0.024$), having effective stress coping mechanisms ($p = 0.014$), feeling stable in life ($p = 0.046$), and taking care of personal needs ($p = 0.015$). These results indicate increased emotional resilience and a stronger sense of safety, supporting the effectiveness of the IDEA Framework in promoting well-being in the YPNST workshop. Improvements in these domains are likely to contribute to better mental health, reduced stress levels, and overall well-being. These results support the value of the IDEA Framework (Saj & Mete, 2025) and the value of the YPNST workshop.

Table 1. Wilcoxon Signed Ranks Test Pre-Post Results on Self-Esteem

	Q1-Pre-Post	Q2 Pre-Post	Q3 Pre-Post	Q4 Pre-Post	Q5 Pre-Post	Q6 Pre-Post	Q7 Pre-Post	Q8 Pre-Post	Q9 Pre-Post	Q10 Pre-Post
Z	-2.000[b]	-1.318[b]	-2.236[b]	-2.530[b]	-1.732[b]	-1.933[b]	-1.000[b]	-1.730[b]	-1.414[b]	-2.121[b]
2-tailed significance p	.046*	.187	.025*	.011*	.083	.053	.317	.084	.157	.034*

b. Based on positive ranks

* p-value less than 0.05 indicates statistically significant differences between pre-and post-intervention scores.

Significant improvements in feelings of self-esteem were observed for questions 1, 3, 4, and 10. The results are highlighted:

- Q1: "*One the whole, I am satisfied with myself*": p = 0.046 → Significant increase post-screening
- Q3: "*I feel that I have several good qualities*": p = 0.025 → Significant increase post-screening.
- Q4: "*I am able to do things as well as most other people*": p = 0.011 → Significant increase post-screening
- Q10: "*I take a positive attitude toward myself*": p = 0.034 → Significant increase post-screening

Consequently, there was an improvement in self-satisfaction, acknowledging one's good qualities and abilities, and one's positive attitude about oneself after completing the YPNST workshop.

Table 2. Wilcoxon Signed Ranks Test Pre and Post Self-Reported Self-Confidence Score

	Q12 Pre-Post
Z	-3.066[b]
2-tailed significance p	.002*

b. Based on positive ranks

* p-value less than 0.05 indicates statistically significant differences between pre-and post-intervention scores.

Question 12 asked, "On *a scale from 1 to 10, how confident do you feel about yourself*" and yielded a significantly positive result. It identified that participants reported higher levels of confidence after engaging in the YPNST workshop.

Table 3. Wilcoxon Signed Ranks Test Safety and Stability

	Q1-Pre-Post	Q2 Pre-Post	Q3 Pre-Post	Q4 Pre-Post	Q5 Pre-Post	Q6 Pre-Post	Q7 Pre-Post	Q8 Pre-Post
Z	-1.000[b]	-2.000[b]	-2.264[b]	-1.000[b]	-2.460[b]	-2.585[b]	-2.428[b]	-1.633[b]
2-tailed significance p	.317	.046*	.024*	.317	.014*	.010*	.015*	.102

b. Based on positive ranks

* p-value less than 0.05 indicates statistically significant differences between pre-and post-intervention scores.

The Wilcoxon Signed Ranks Test yielded statistically significant results for five questions regarding participants' safety and stabilization. The results, found below, highlight an increase in stability, comfort, coping mechanisms, groundedness, and control. These results demonstrate an increase in safety and stabilization after engaging in the YPNST workshop.

Significant Results ($p < 0.05$)

- **Q2: "***I have a sense of stability in my life right now***":** $p = 0.046$ → Significant increase post-screening
- **Q3:** "*I feel comfortable expressing my emotions*": $p = 0.024$ → Significant increase post-screening.
- **Q5: "***I have effective coping mechanisms for handling stress***":** $p = 0.014$ → Significant increase post-screening
- **Q6 "***I feel grounded and present in my body***":** $p = 0.010$ → Significant increase post-screening
- **Q7**: "*I feel like I can take care of my own needs*": $p = 0.015$ → Significant increase post-screening

Summary of Results Qualitative Findings

Themes

Throughout the research study, two central themes emerged: 1) Self-Esteem and Confidence, and 2) Safety and Stabilization. Below is a comprehensive summary of the qualitative data related to both themes, and it explores the broader implications of these findings. The qualitative data collected indicate that participants experienced notable improvements in self-esteem, confidence, and feelings of safety and stabilization following the implementation of the IDEA framework within the YPNST workshop.

1. Self-Esteem and Confidence

Participants associated confidence and emotional well-being with physical sensations such as warmth, lightness, relaxed muscles, steady heartbeat, smiling, and a sense of strength. Many reported feeling more confident and optimistic about themselves after the intervention, with physical postures reflecting increased self-assurance, such as relaxed shoulders and chests.

Qualitative Findings: Self-Esteem

The thematic analysis revealed that participants linked confidence and emotional well-being to specific physical sensations, such as warmth, lightness, steady breathing, relaxed muscles, a steady heartbeat, smiling, and a sense of strength. These sensations were viewed as markers of positive change fostered through mindfulness, body awareness, and supportive environments. Following the YPNST workshop, all participants reported increased self-esteem, either by providing a numerical score or making statements. Some of the positive self-esteem and confidence statements include:

- Participant 2 "*like I am on the top of the world and very happy.*"
- Participant 4 "*I know I am worthy.*"
- Participant 8: expressed feeling "*worthy of all good things*."
- Participant 9: stated they felt *"good. I feel I am a worthy and complete person. I feel like I can accept good things that happen to me.*"
- Participant 10: "*for the most part I feel I am worthy and deserve respect and happiness.*"
- Participant 11: "*I am worthy of respect and love*."
- Participant 12: noted they felt "*better, good after affirmations*."

Words such as "*worthy*", "*confident*", and "*more secure*" were common among participants in the post-workshop findings. Others noted an improvement in physical sensations such as:

- Participant 3 reported: "*feeling strong and relaxed, head high, shoulders relaxed, chest open,*" which indicates a physical posture that reflected increased self-assurance.
- Participant 11 also reported: "*feeling strong/better posture.*"
- Participant 5: "*sitting/standing upright, making eye contact, relaxed abdomen.*"

Others noted an improvement in psychological outcome, such as:

- Participant 4: "*feeling empowered, knowing you can do it yourself, that you can make choices on your own.*"
- Participant 7: "*a quiet brain, no negative self-talk, affirmations and kindness in my mental reactions to myself and others*."

Implications

These qualitative findings indicate that the YPNST workshop successfully enhances self-confidence on both physical and psychological levels. Participants expressed greater feelings of worthiness and empowerment. Participants described physical sensations and postural changes that also supported the conclusion that the YPNST workshop successfully increased self-esteem, underscoring the holistic impact of the intervention on participants' self-perception and emotional well-being.

2.Safety and Stabilization

Regarding safety, participants linked feelings of calmness, bodily groundedness, and trust to their sense of safety. External factors like supportive relationships and secure environments contributed to these feelings. Post-intervention, many expressed a heightened sense of calm and confidence in their safety, emphasizing the connection between physical sensations and emotional security.

Qualitative Findings: Safety

Following the YPNST workshop, all participants reported increased safety, either quantitatively or qualitatively. Some of the positive safety statements include:

- Participant 2: "*I felt very safe during this practice*."
- Participant 5 reported: "*feeling warm, relaxed muscles, slow heart rate.*"
- Participant 6 reflected on the: "*relaxation, low, steady heart rate, calm mind, comfortable temperature*" during the practice.
- Participant 7 noticed their: "*low heart rate, relaxed shoulders, no headache, no chest tightness, a lightness within (mental and physical).*"
- Participant 8 reflected they felt: "*warmth, relaxed muscles, my body feels strong and healthy.*"

Following the YPNST workshop, all participants reported experiencing increased feelings of safety. Examples of their positive safety-related statements include feelings of warmth, relaxed muscles, steady heartbeat, calmness, and a sense of strength and health. Participants described noticing both physical and mental signs of safety, which are key indicators of their safety state. These qualitative findings suggest that the YPNST workshop effectively helped participants recognize and connect with sensations that signal feelings of safety, promoting awareness of their internal safety indicators and enhancing their sense of well-being.

Implications

Qualitative analysis showed that post-intervention, many participants experienced higher levels of confidence and greater feelings of safety. This suggests that the IDEA Framework, in conjunction with the YPNST workshop, fosters conditions characterized by calmness, relaxation, and heightened body awareness. Participants often described sensing internal signals that indicated personal safety, such as physical sensations of relaxation or a steady heartbeat. This implies that the intervention enhanced their awareness of somatic cues associated with safety, supporting the role of body-based practices in promoting emotional well-being. These results highlight the importance of incorporating somatic awareness into integrative therapeutic models, as it contributes to long-lasting improvements in emotional regulation, resilience, and self-trust.

Discussion

The findings from this study demonstrate the significant positive impact of the IDEA Framework within the YPNST workshop on self-esteem, confidence, feelings of safety and stabilization among participants. Quantitative data revealed statistically significant improvements across multiple measures of self-esteem, including overall satisfaction with oneself, recognition of personal qualities, confidence levels, and positive self-attitudes. These results suggest that the intervention effectively enhances participants' perceptions of their self-worth and confidence, aligning with existing literature highlighting the benefits of mindfulness and body awareness practices in fostering self-esteem (Saj & Mete, 2025). Participants showed similar improvements in perceptions of safety and stability. Almost all of the participants reported feeling more grounded, and more able and confident to identify and express emotions. The qualitative findings further support these results, with participants describing physical sensations such as "*warmth,*" "*relaxed muscles,*" and "*steady heartbeat*" as markers of safety. Such somatic indicators are consistent with prior research emphasizing the role of body awareness in emotional regulation and safety perception.

Thus, the results of this research indicate the satisfactory effects of the IDEA Framework in the YPNST workshop. This study predominantly investigates the aspects of self-esteem, confidence, feelings of security, and stability in the participants. Substantial improvements in self-esteem, as revealed by quantitative data across various measures, include generic self-satisfaction, recognition of personal attributes, confidence levels, and positive self-attitudes. The results suggest that the intervention significantly enhanced the self-worth and confidence perceptions of the participants. This is reflected in the findings reported by Bhide et al. (2023), O'Shea et al. (2021), and Saj and Mete (2025), which underscore the critical role that mindfulness and body awareness play in developing self-esteem since the benefits of mindfulness, yoga, and body awareness uphold self-esteem and personal empowerment.

Participants improved similarly in their perceptions of safety and stability. Nearly all felt more grounded and confident in their ability to discern and express emotions. The results support Amano and Toichi (2016) and Kuhfuß et al. (2021), demonstrating that somatic practices contribute to emotional regulation, stress reduction, and resilience. This qualitative data supported the numerical data. For some participants, sensations like warmth, muscle relaxation, and the steady beat of the heart were identified as signs of safety. These physical cues support more recent research emphasizing the importance of body-based awareness in building internal stability and a sense of safety (Butera & Kreatsoulas, 2018; Larocque & Moreau, 2020).

In summation, both the quantitative and qualitative findings concluded that the applied IDEA Framework, in the context of the YPNST workshop, had a positive impact on wellness-giving self-esteem and safety in more meaningful, lasting ways. Findings, for example, state that augmenting traditional psychotherapy techniques with somatic awareness and a body-centered intervention will ensure better therapeutic efficacy in the service of the wellness goal (Shapiro, 2018; Milling, 2023). Further research might be conducted on the longer-lasting or ongoing effects of the various processes used, as well as how the layering techniques of the IDEA Framework can be integrated into other broader mental health and educational programs. In that way, clinicians may have other tools to increase continuity of growth, emotional safety, and resilience with varied populations.

Limitations

The following limitations of this study must be mentioned, which help inform fruitful areas for future research to pursue. First, given the small sample size and lack of a control group, these preliminary findings should be interpreted with caution. Further research employing larger, randomized controlled trials is warranted to substantiate and generalize these effects. Future investigations could also incorporate longitudinal follow-ups and additional physiological and psychological measures to deepen understanding of the reported improvements. Other areas of consideration are around professional training and guidance. This would be a limitation, as proper training is essential to ensure safe and effective practices, particularly for bilateral stimulation and hypnotherapy, where there is a potential to harm others if not performed by a skilled and trained professional. Furthermore, integrating practice knowledge into experience within the IDEA framework is complex, requiring the practitioner to manage multiple modalities and develop the skills necessary to act ethically and avoid harm to others.

Future Research Directions

Therapeutic modality/context, within a layered approach, merits investigation as to its particular contribution to outcomes in future research. For example, investigating yoga, bilateral stimulation, hypnotherapy, and emotional regulation techniques independently, pre- and post-tested, would thus create a clearer picture of their individual and synergistic effects. The interaction and number of modalities may be optimized to maximize the efficiency and therapeutic outcome of the IDEA framework approach. Other research may also include some physiological measures, for example, heart rate variability, cortisol level, or neuroimaging, to make objective assessments of any physiological changes in the body. Neural changes might also be investigated using CT scans and other brain imaging techniques, pre- and post-applications of the IDEA framework and approach.

Conclusion

In this study, substantial indicators for improvements in self-esteem, safety, and stability, as well as for the multimodal yoga intervention, were presented. For instance, the development of psychological resilience and emotional regulation was derived by integrating yoga, meditative practices, bilateral stimulation, and hypnotherapy into the YPNST workshop, which followed the procedural guidelines of the IDEA Framework. A mixed format of data collection indicated that the practice of body-centered mindfulness is one way to work toward strengthening psychological resilience and emotional regulation; self-esteem and safety scores improved moderately yet significantly on the quantitative level, while qualitative results indicated that confidence, self-worth, and bodily consciousness received the most emphasis in terms of changes experienced. Participants described the sensations in their bodies in terms such as relaxing, grounding, and strong, which the researchers saw as indicators of feelings of safety and wellness. The IDEA Framework provided structure and organization in layering various therapeutic modalities while helping to achieve holistic well-being. This was an effective means by which the two practices, coming from mind-centered and body-centered perspectives, are linked. However, the result was promising and further research is imperative. Longitudinal studies are necessary to determine the sustainability of these benefits. Such training is essential for practitioners to apply it safely and in a socially acceptable manner. Findings have indicated that a diversified multi-modal approach should draw from the IDEA Framework to deal with self-esteem and confidence issues. More activity-based therapies, such as yoga and bilateral stimulation, should be incorporated into the therapy environment to help clients ground

themselves and develop resilience, having stated that they feel safe and stable in their current state. The self-confidence measure suggested that programs enhancing self-esteem should integrate hypnotherapy with mindfulness. Given the necessary observations of good feedback, the next iteration of the workshops should include qualitative and quantitative evaluations to incorporate measurable outcomes and lived experiences. Clinicians may wish to use the IDEA Framework to combine those modalities that lessen the impact and give clients self-regulation tools they can use throughout their lives.

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Psychological Resilience as a Predictor of Burnout Levels in Parents of Children with Special Needs

Özel Gereksinimli Çocukların Ebeveynlerinde Tükenmişlik Düzeylerinin Yordayıcısı Olarak Psikolojik Dayanıklılık

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Abstract

This study investigates the relationship between psychological resilience and burnout among parents of children attending special education institutions. Prolonged stress in these parents often leads to burnout and depression, adversely affecting both parental well-being and child outcomes. The research involved 155 participants (103 mothers, 52 fathers), who completed the Maslach Burnout Inventory (MBI) and the Psychological Resilience Scale (PRS). The analysis focused on how resilience subdimensions self-perception, social competence, structural style, family cohesion, future perception, and social resources predict burnout components: emotional exhaustion and depersonalization. Results revealed that psychological resilience subdimensions collectively accounted for 15% of the variance in emotional exhaustion ($R^2 = .146$, $p<.01$), with social resources emerging as the sole significant individual predictor ($p<.01$). For depersonalization, resilience subdimensions explained 30% of the variance ($R^2 = .298$, $p < .001$), with structural style, family cohesion, social competence, and social resources serving as significant predictors ($p<.05$ to $p< .001$). These findings underscore psychological resilience as a protective factor against burnout, particularly highlighting the role of social resources in mitigating emotional exhaustion and multiple resilience components in reducing depersonalization. The study aligns with existing literature, emphasizing that enhancing parents' resilience especially through strengthening social networks, family cohesion, and adaptive coping strategies can buffer against burnout. Interventions targeting these resilience factors may improve parental mental health, thereby fostering more supportive environments for children with special needs. These insights advocate for integrating resilience-building programs into support systems for families in special education contexts, addressing both individual and relational dimensions of well-being.

Keywords: Parent, Psychological Resilience, Burnout.

Öz

Bu çalışma, özel eğitim kurumlarına devam eden çocukların ebeveynleri arasında psikolojik dayanıklılık ile tükenmişlik arasındaki ilişkiyi incelemektedir. Bu ebeveynlerde uzun süreli stres genellikle tükenmişlik ve depresyona yol açarak hem ebeveynlerin iyilik halini hem de çocukların gelişimsel sonuçlarını olumsuz etkilemektedir. Araştırmaya 155 katılımcı (103 anne, 52 baba) dahil edilmiş olup, katılımcılar Maslach Tükenmişlik Envanteri ve Psikolojik Dayanıklılık Ölçeği'ni doldurmuştur. Analizler, dayanıklılığın alt boyutları olan benlik algısı, sosyal yeterlik, yapısal tarz, aile uyumu, gelecek algısı ve sosyal kaynakların, tükenmişliğin duygusal tükenme ve duyarsızlaşma bileşenlerini nasıl yordadığını incelemiştir. Sonuçlar, psikolojik dayanıklılık alt boyutlarının duygusal tükenme değişkenindeki varyansın %15'ini açıkladığını göstermiştir ($R^2 = .146$, $p < .01$). Alt boyutlar arasında yalnızca sosyal kaynaklar anlamlı bir yordayıcı olarak ortaya çıkmıştır ($p < .01$). Duyarsızlaşma için ise dayanıklılık alt boyutları varyansın %30'unu açıklamıştır ($R^2 = .298$, $p < .001$) ve yapısal tarz, aile uyumu, sosyal yeterlik ve sosyal kaynaklar anlamlı yordayıcılar olarak belirlenmiştir ($p < .05$ ile $p < .001$ arasında). Bu bulgular, psikolojik dayanıklılığın tükenmişliğe karşı koruyucu bir faktör olduğunu vurgulamakta; özellikle sosyal kaynakların duygusal tükenmeyi azaltmada, birden fazla dayanıklılık bileşeninin ise duyarsızlaşmayı azaltmada önemli rol oynadığını göstermektedir. Çalışma, mevcut literatürle uyumlu olarak, ebeveynlerin dayanıklılığını artırmanın –özellikle sosyal ağları güçlendirme, aile uyumunu geliştirme ve uyumlu başa çıkma stratejilerini destekleme yoluyla– tükenmişliğe karşı koruyucu bir etki sağlayabileceğini ortaya koymaktadır. Bu dayanıklılık faktörlerine yönelik müdahaleler, ebeveynlerin ruh sağlığını iyileştirerek özel gereksinimli çocuklar için daha destekleyici ortamlar oluşturulmasına katkıda bulunabilir. Bu sonuçlar, dayanıklılık geliştirme programlarının özel eğitim bağlamındaki aile destek sistemlerine entegre edilmesini, bireysel ve ilişkisel iyi oluş boyutlarını birlikte ele alacak şekilde önermektedir.

Anahtar Kelimeler: Ebeveyn, Psikolojik Dayanıklılık, Tükenmişlik.

Introduction

Caring for children with special needs is an emotionally and physically demanding process for parents. Throughout this process, parents face multifaceted challenges, including access to healthcare services, educational support, social stigmatization, and financial burdens (Smith & Jones, 2018). According to data from the World Health Organization (WHO, 2023), approximately 240 million children worldwide require support due to disabilities or special needs. This situation may lead parents to experience long-term psychological stress and adverse outcomes such as burnout syndrome (Hubert & Aujoulat, 2018). Burnout is a syndrome characterized by emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment, resulting from chronic stress (Maslach & Leiter, 2016). Burnout is more prevalent among parents of children with special needs due to the ongoing caregiving role and lack of social support (Sadziak, Wilinski & Wieczorek, 2019). For instance, a study conducted by Norlin and Broberg (2019) revealed that 65% of parents of children with autism spectrum disorder exhibited clinical levels of burnout symptoms. Similarly, a study conducted in Turkey found that 58% of parents of children with special needs experienced emotional exhaustion (Güler, Bedel & Çelik, 2022). However, not all parents are equally affected by this process. Some parents can adapt to stressors and mitigate burnout levels through psychological resilience (Southwick et al., 2016).

Psychological resilience is defined as a dynamic process that enables individuals to cope with difficulties, establish meaningful relationships, and adapt to change (Masten, 2018). This concept plays a crucial role in helping individuals under chronic stress mobilize their internal and external resources to maintain well-being (Ungar, 2021).

The literature on resilience levels among parents of children with special needs remains limited. Existing research predominantly focuses on risk factors associated with burnout (Silva et al., 2020) while inadequately addressing protective factors such as social support, self-efficacy, and coping strategies-key components of resilience (Thompson et al., 2019). For example, although Liu and Wang (2022) demonstrated that resilience training programs improved parents' stress management, the applicability of such interventions within the Turkish context remains uncertain. Additionally, how cultural factors shape the relationship between resilience and burnout has yet to be fully understood (Chen & Bonanno, 2020).

Psychological resilience is conceptualized as an adaptive process that mitigates the adverse effects of stress (Hunter, 2001). It is also described as an individual's capacity to recover from adversity, failure, and setbacks, and to regain their previous psychological state (Luthans, 2002). Several factors, including personality traits, skills, experiences, attitudes, and beliefs, collectively shape psychological resilience. These factors can play either a positive or negative role in the stress management process and directly influence a parent's perspective on their child with special needs (Benson & Karlof, 2009).

Friborg et al. (2005) identified five key components in explaining the structure of psychological resilience: individual competence, social competence, family cohesion, social resources, and structured style. Individual competence refers to a person's self-confidence, self-efficacy, self-worth, and future aspirations. Social competence encompasses an individual's ability to adapt socially, extraversion, and willingness to engage in social activities. Structured style relates to the ability to maintain daily routines, plan, and organize tasks, while family cohesion reflects the harmony within the family and the support received from family members. Social resources refer to the support provided by close social circles, such as friends and relatives (Friborg et al., 2005).

Another significant consequence of the stress experienced by parents of children with special needs is burnout. Maslach defines burnout as a psychological syndrome that emerges in response to prolonged exposure to stress in a given environment, characterized by emotional, mental, and physical exhaustion (Maslach, Schaufeli & Leiter, 2001). When individuals are exposed to severe stressors, they may be unable to overcome the adverse effects, leading to burnout. Individual factors influencing burnout include gender, age, education level, marital status, work experience, social support, personality traits, and expectations, whereas family structure and social support constitute social factors (Bitmiş, Sökmen & Turgut, 2013). Maslach and Jackson (1981) conceptualized burnout as comprising three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion refers to feeling emotionally drained due to work responsibilities; depersonalization is characterized by emotionally detached interactions with those receiving care or services; and reduced personal accomplishment manifests as feelings of inadequacy in one's professional role (Maslach & Leiter, 2008).

Parents of children with special needs may experience burnout due to difficulties in accepting their child's condition, feelings of helplessness and insecurity stemming from a lack of knowledge about the process, and unawareness of available social support resources, all of which negatively impact psychological resilience (Temel, 2015). A study by Dimala, et al. (2024) found that the type and severity of disability significantly influenced parental anxiety and burnout, particularly among mothers. The study also emphasized that these factors are critical contributors to burnout (Dimala, et al., 2024),. A review of the literature suggests that parents experience burnout due to the stress associated with caring for children with special needs (Kurban, 2019).

Low psychological resilience and high levels of burnout among parents of children with special needs negatively impact the child's well-being. In addition to experiencing positive emotions, parents often report feelings of fear, anxiety, concern, panic, anger, and fatigue throughout their child's development. Changes in family responsibilities and roles, coupled with a lack of information regarding how to support a newly diagnosed child, serve as significant stressors. Furthermore, parental burnout and the ongoing challenges they face contribute to a decline in overall quality of life. As parental responsibilities for a child with special needs increase, symptoms of burnout may become more pronounced. For example, research by Akün, Nuri, and Karabıyık (2022) found that parents of children attending inclusion classes experienced higher levels of burnout associated with unmet needs (burnout) (Nuri et al., 2022). Additionally, Avcanok and Nuri et al. (2025) reported that distress tolerance an aspect related to psychological resilience-varied significantly among parents of children with special needs, highlighting how coping resources can influence parental outcomes (Avcanok et al., 2025).

In the Turkish Republic of Northern Cyprus (TRNC), the number of parents with children with special needs is steadily increasing. However, no studies have been identified examining the relationship between burnout and psychological resilience levels in this context. This study aims to address this gap by investigating the relationship between burnout and psychological resilience levels among parents of children with special needs. It is anticipated that identifying this relationship will facilitate the provision of necessary support for parents, ultimately enhancing their integration into society.

Research Questions

The purpose of this study is to examine the relationship between burnout and psychological resilience levels among parents whose children attend special education institutions. To achieve this goal, the study seeks to answer the following research questions:

1. Do the subdimensions of psychological resilience predict emotional exhaustion, a subdimension of burnout, among parents whose children attend special education institutions?

2. Do the subdimensions of psychological resilience predict depersonalization, a subdimension of burnout, among parents whose children attend special education institutions?

3. Do the subdimensions of psychological resilience predict personal accomplishment, a subdimension of burnout, among parents whose children attend special education institutions?

Method

Research Design

This study employed a correlational survey model to examine the relationship between burnout and psychological resilience levels among parents of children with special needs. Among general survey models, the correlational survey model aims to determine the existence and/or degree of a relationship between two or more variables (Fraenkel & Wallen, 2009; Karasar, 2005).

Study Group

The study group consisted of 155 parents (mothers, n = 103, 66.5%; fathers, n = 52, 33.5%) of children with special needs enrolled in special education schools in the Turkish Republic of Northern Cyprus (TRNC). Participants were administered a Demographic Information Form, the Maslach Burnout Inventory – Parent Form, and the Psychological Resilience Scale.

Data Collection Instruments

Participants were provided with the Demographic Information Form, the Maslach Burnout Inventory - Parent Form, and the Psychological Resilience Scale. The Demographic Information Form, developed by the researchers, included a question about the gender of the parents.

Maslach Burnout Inventory – Parent Form

In the Turkish adaptation of the Maslach Burnout Inventory (MBI) by Ergin, the terms “people I encounter in my job” and “job” were modified to “my child” and “my child’s care,” following a similar approach to Pelsma, Roland, Tollefson, and Wigington's (1989) validation study of the MBI among mothers. The Turkish adaptation of the scale for parents was conducted by Duygun and Sezgin (2003). The original Turkish version of the MBI was used to assess burnout levels among teachers, while the adapted parent version was employed to measure parental burnout. While the version adapted by Duygun and Sezgin (2003) had a two-factor structure, the three-factor structure was confirmed in the Northern Cyprus sample. The Cronbach’s alpha reliability coefficient of the scale was reported as 0.81. The inventory consists of 22 items and evaluates burnout across three dimensions. The scale was used in a five-point Likert format (0–

4) in this study. The Emotional Exhaustion dimension includes nine items, the Personal Accomplishment dimension comprises eight items, and the Depersonalization dimension consists of five items. Higher scores on the Emotional Exhaustion and Depersonalization subscales, combined with lower scores on the Personal Accomplishment subscale, indicate higher levels of burnout.

Psychological Resilience Scale

Friborg et al. (2005) developed the Psychological Resilience Scale to assess individuals' resilience levels in the workplace. In their study, Friborg et al. (2005) subdivided the “personal strength” dimension into “self-perception” and “future perception,” resulting in a six-factor structure. The scale measures “structural style” and “future perception” with four items each, “family cohesion,” “self-perception,” and “social competence” with six items each, and “social resources” with seven items. The internal consistency coefficients obtained via structural equation modeling were reported as 0.80 for Self-Perception, 0.75 for Future Perception, 0.82 for Social Competence, 0.86 for Family Cohesion, 0.84 for Social Resources, and 0.76 for Structural Style.

Data Analysis

Participants were informed about the purpose and conduct of the research, and voluntary participation was ensured. The data obtained in the study were analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows 21.0. Pearson’s correlation coefficient was used to determine the relationship between the two variables. Additionally, multiple regression analysis was conducted to assess the predictive effect of psychological resilience on burnout.

Results

An examination of Table 1 reveals that the multiple regression analysis results indicate that the subdimensions of psychological resilience-structural style, future perception, family cohesion, self-perception, social competence, and social resources-collectively predict emotional exhaustion, $R = .382$, $R^2 = .146$, $F(6,149) = 4.255$, $p < .01$. It can be stated that psychological resilience accounts for 15% of the variance in emotional exhaustion. When analyzing which variable contributes to this variance, it was observed that only the Social Resources subdimension of psychological resilience significantly predicts emotional exhaustion ($p<.01$). The other subdimensions (structural style, future perception, family cohesion, self-perception, and social competence) were not found to be significant predictors of emotional exhaustion.

Table 1. Multiple Regression Analysis for Predictors of Emotional Exhaustion

Psychological Resilience	β	SE	B	t	p
Constant	14.874	6.514	-	2.283	.024
Structural Style	.188	.320	.054	.587	.558
Future Perception	-.413	.328	-.098	-1.259	.210
Family Cohesion	.226	.229	.096	.989	.324
Self-Perception	.439	.245	.147	1.789	.076
Social Competence	.366	.197	.157	1.857	.065
Social Resources	-.451	.134	-.266	-3.356	.001

Table 2. Multiple Regression Analysis for Predictors of Depersonalization

Psychological Resilience	β	SE	B	t	p
Constant	1.010	3.166		.319	.750
Structural Style	.338	.155	.182	2.172	.031
Future Perception	.190	.159	.085	1.196	.234
Family Cohesion	.264	.111	.209	2.374	.019
Self-Perception	-.109	.119	-.069	-.919	.360
Social Competence	.328	.096	.262	3.423	.001
Social Resources	-.240	.065	-.264	-3.673	.000

An examination of Table 2 reveals that the multiple regression analysis results indicate that the subdimensions of psychological resilience-structural style, future perception, family cohesion, self-perception, social competence, and social resources-collectively predict depersonalization, R=.546, R^2 = .289, F(6,149) = 10.532, p<.001. It can be stated that psychological resilience accounts for 29% of the variance in depersonalization. When analyzing which variables contribute to this variance, it was observed that the subdimensions of family cohesion and structural style (p < .05), social competence (p<.01), and social resources (p < .001) significantly predict depersonalization. However, the other subdimensions (future perception and self-perception) were not found to be significant predictors of depersonalization.

An examination of Table 3 reveals that the multiple regression analysis results indicate that the subdimensions of psychological resilience-structural style, future perception, family cohesion, self-perception, social competence, and social resources-collectively predict personal accomplishment, R = .377, R^2 =. 142, F(6,149) = 4.123, p<.001. It can be stated that psychological resilience accounts for 14% of the variance in personal accomplishment. When analyzing which variables contribute to this variance, it was observed that the subdimensions of social competence and social resources (p<.05), and social resources (p<.01) significantly predict personal accomplishment. However, the other subdimensions (structural style, future perception, and family cohesion) were not found to be significant predictors of personal accomplishment.

Table 3. Multiple Regression Analysis for Predictors of Personal Achievement

Psychological Resilience	β	SS	B	t	P
Constant	21.730	5.287		4.110	.000
Structural Style	.402	.260	.143	1.549	.124
Future Perception	-.291	.266	-.085	-1.095	.275
Family Cohesion	-.250	.186	-.131	-1.347	.180
Self-Perception	.623	.199	.259	3.132	.002
Social Competence	-.362	.160	-.192	-2.262	.025
Social Resources	.232	.109	.169	2.125	.035

Discussion

Parents of children with special needs face various challenges, among which the most demanding is the caregiving responsibility for their child (Kaytez et al., 2015). Additionally, harmful behaviors exhibited by the child in social settings or discomfort due to the nature of the environment further strain families. The economic burden imposed by having a child with special needs, lack of sufficient information, tension within marital relationships, reduced participation in social activities and environments, and the attitudes of other members of society contribute to stress and emotional difficulties for these families (Nuri, 2019). Various studies have indicated that, due to these challenges, parents of children with special needs experience high levels of burnout. The predictive power of psychological resilience in relation to burnout underscores the importance of strengthening psychological resilience in services provided to these families.

First, multiple regression analysis revealed that general psychological resilience accounts for 15% of the variance in emotional exhaustion. However, when examining its subdimensions, only the “Social Resources” subdimension was found to have a significant predictive effect ($p<.01$). This finding suggests that among the components of psychological resilience, social support and environmental resources play a more decisive role in reducing individuals' levels of emotional exhaustion compared to other components (e.g., structural style, future perception, family cohesion, self-perception, and social competence). This result is supported by the literature. For instance, the study conducted by Maslach and Jackson (1981) identified lack of social support as a key determinant of burnout. Additionally, research by Zambrano-Chumo and Guevara (2024) and Buonomo et al. (2018) demonstrated that individuals with higher levels of social resources tend to experience lower levels of burnout. Social resources include elements such as support from friends, family, and colleagues, and the provision of such support plays a critical role in reducing emotional stress and enhancing psychological resilience. The fact that other subdimensions of psychological resilience did not show a significant effect on emotional exhaustion suggests that these factors are shaped not only by individual stress-coping strategies but also by the support of the social environment. Consequently, strengthening social support networks emerges as a crucial intervention strategy in reducing individuals' levels of emotional exhaustion (Nuri, Karabıyık, & Akün, 2022).

Findings from the study indicate that the subdimensions of psychological resilience family cohesion, structural style, social competence, and social resources significantly predict depersonalization. These results support the role of psychological resilience components in regulating emotional responses during the stress-coping process. The significant predictive effect of family cohesion particularly aligns with the literature, which emphasizes the critical role of family support mechanisms in managing emotional exhaustion and depersonalization (Connor & Davidson, 2003; Avcanok, Nuri, Bağlama, & Ruştioğlu, 2025). Similarly, the impact of social resources is consistent with studies highlighting the protective function of social support networks on psychological resilience (Ozbay et al., 2007). However, the non-significant relationship between future perception, self-perception, and depersonalization is noteworthy. This may indicate that these subdimensions are more closely associated with internal motivation or self-esteem rather than emotional disengagement (Campbell-Sills et al., 2006). For instance, the stronger association of future perception with psychological processes such as depression or anxiety could explain its lack of an expected effect in the context of depersonalization. The study’s $R^2 = .289$ value suggests that psychological resilience factors explain approximately 29% of the variance in depersonalization, indicating a moderate explanatory power. This finding suggests that depersonalization is not solely related

to individual psychological resources but also influenced by environmental and contextual factors (e.g., workload, organizational stress) (Maslach et al., 2001).

Findings from the multiple regression analysis further indicate that the subdimensions of psychological resilience explain 14.2% of the variance in personal accomplishment, with social competence and social resources emerging as significant predictors. This suggests that individuals with stronger perceived social skills and supportive networks are more likely to achieve personal success. This result is consistent with the existing literature, which underscores the role of social resources in fostering resilience and goal attainment (Lee et al., 2020; Smith & Jones, 2018). The moderate effect size ($R^2 = .142$) indicates that while psychological resilience contributes to personal accomplishment, other factors such as personality traits, environmental conditions, and socioeconomic status also play significant roles (Masten, 2018). The non-significant relationships between structural style, future perception, family cohesion, and emotional exhaustion contrast with previous research suggesting that cognitive and familial factors serve as protective elements against burnout (Salsabila & Adrian, 2025). This discrepancy may stem from cultural or contextual differences in the sample, variations in measurement tools, or the specific conditions of the participants' environments. For instance, in contexts where individual autonomy is prioritized, social resources may play a more prominent role in reducing burnout compared to familial or cognitive factors (Fletcher & Sarkar, 2013).

The finding that psychological resilience explains 15% of the variance in depersonalization highlights its protective role against emotional detachment. However, the non-significant contribution of certain subdimensions (e.g., future perception) suggests that resilience exerts varying effects on different dimensions of burnout. This result aligns with Maslach and Leiter's (2016) multidimensional burnout model, which posits that distinct factors influence different components of burnout, such as exhaustion, cynicism, and inefficacy.

Conclusions and Recommendations

The findings of the study suggest that, in general, resilience plays a significant role in reducing emotional exhaustion, with this effect primarily arising from the subdimension of social resources. In practice, strengthening social support systems may be an effective method for combating burnout in both professional and social life. The results of multiple regression analysis examined the impact of the subdimensions of psychological resilience on emotional exhaustion, and it was found that these variables explained 15% of the variance in emotional exhaustion. However, it was found that only social resources significantly predicted emotional exhaustion ($p<.01$). The other subdimensions (structural style, future perception, family cohesion, self-perception, social competence) did not have a significant impact on emotional exhaustion. This finding highlights the critical role of social support mechanisms in reducing individuals' levels of burnout. Based on these results, it is essential to create and strengthen supportive social networks for workers and individuals. Institutions can reduce emotional exhaustion levels of employees by implementing policies that improve social support systems. In particular, in stressful work environments, interventions such as mentoring programs, group therapies, or solidarity activities can increase individuals' access to social resources and prevent burnout. Trainings aimed at enhancing psychological resilience can be more effective when combined with programs focusing on social support mechanisms.

The subdimensions of psychological resilience have a significant impact on depersonalization, with 29% of the variance in depersonalization explained by psychological resilience. More specifically, family cohesion and structural style ($p<.05$), social competence ($p<.01$), and social resources ($p<.001$) emerged as significant predictors of depersonalization. However, it was determined that future perception and self-perception had no significant effect on depersonalization. These results indicate that an individual's harmony with their family, a structured lifestyle, strong social skills, and supportive social resources are critical factors in reducing depersonalization. Particularly, the finding that social resources are the strongest predictor underscores the protective role of social support in the burnout process and highlights its importance in reducing individuals' levels of depersonalization. Workshops aimed at increasing individuals' social competence, communication skills training, and team-building activities can be organized. In particular, programs that enhance empathy and strengthen social solidarity should be implemented in workplaces. Organizational programs that enhance psychological resilience (e.g., flexible working hours, burnout prevention programs) should be applied to reduce employees' levels of depersonalization.

The impact of the subdimensions of psychological resilience on personal accomplishment was examined, and it was found that 14.2% of the variance in personal accomplishment was explained by psychological resilience. Specifically, social competence ($p<.05$) and social resources ($p<.01$) were identified as significant predictors of personal accomplishment. However, structural style, future perception, and family cohesion did not have a significant effect on personal accomplishment. These findings suggest that possessing strong social skills and access to supportive social resources are key factors in enhancing personal accomplishment. Social competence enables individuals to communicate effectively and collaborate, while social resources provide motivation and support mechanisms that foster success. Mentorship and coaching programs should be widely implemented in workplaces and educational settings. Support groups, professional networks, and community-based events can be established to increase access to social resources for employees and students. Further comprehensive studies examining other factors influencing personal accomplishment (e.g., motivation, personality traits, socioeconomic status) can be conducted. Longitudinal studies may analyze the effects of social competence and social resources over time.

Declarations

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Digital Family Bonding and Psychological Well-being among Inter-Island Migrant Students in Indonesia: A Positive Psychology Approach

Endonezya'daki Adalar Arası Göçmen Öğrenciler Arasında Dijital Aile Bağları ve Psikolojik Refah: Bir Pozitif Psikoloji Yaklaşımı

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Abstract

This phenomenological study explores the lived experiences of inter-island migrant students in Indonesia who maintain psychosocial bonds with their families through digital family bonding-digitally mediated interactions that sustain emotional closeness despite physical separation-and examines its implications for psychological well-being. Twenty students who had relocated to different islands within Indonesia were interviewed over a one-year period, and the data were analyzed using Interpretative Phenomenological Analysis (IPA). Four main themes emerged: (1) emotional reconnection with family members, enhancing the sense of family presence; (2) digitally mediated psychological support, both instrumental and emotional; (3) emotional and technical disruptions in digital communication; and (4) the maintenance of purpose, motivation, and continuity, reflecting academic resilience supported by digital family bonding. The findings indicate that the psychological benefits of digital family interactions depend not only on communication frequency but also on the emotional quality and depth of exchanges, particularly in sustaining positive relations with others, a core dimension of psychological well-being. Digital family bonding functioned as a psychological buffer that supported resilience among students living away from home. The findings also underscore the need for institutional involvement. Higher education institutions should facilitate social connection opportunities, ensure easy access to psychosocial support, and implement regular well-being assessments to strengthen protective relational frameworks for inter-island migrant students.

Keywords: Digital Family Bonding, Psychological Well-Being, Inter-Island Migrant Students, Positive Psychology, Phenomenology.

Öz

Bu fenomenolojik çalışma, Endonezya'da adalar arası göç eden üniversite öğrencilerinin aileleriyle Dijital Aile Bağlanması yoluyla sürdürdükleri psikososyal ilişkilerin yaşantısal deneyimlerini ve bu ilişkilerin psikolojik iyi oluş üzerindeki etkilerini incelemektedir. Dijital aile bağlanması, fiziksel mesafeye rağmen duygusal yakınlığı sürdüren teknoloji aracılı aile etkileşimleri olarak tanımlanmaktadır. Çalışmada, Endonezya içinde farklı adalara yerleşmiş yirmi öğrenciyle bir yıl boyunca derinlemesine görüşmeler yapılmış ve veriler Yorumlayıcı Fenomenolojik Analiz (IPA) yöntemiyle analiz edilmiştir. Analiz sonucunda dört temel tema ortaya çıkmıştır: (1) aile üyeleriyle duygusal yeniden bağlanma ve aile varlığı algısının güçlenmesi; (2) araçsal ve duygusal boyutları içeren dijital psikolojik destek; (3) dijital iletişimde yaşanan duygusal ve teknik aksaklıklar; ve (4) dijital aile bağlanmasıyla desteklenen amaç, motivasyon ve akademik dayanıklılığın sürdürülmesi. Bulgular, dijital aile etkileşimlerinin psikolojik katkısının yalnızca etkileşim sıklığına değil, aynı zamanda iletişimin duygusal niteliği ve derinliğine bağlı olduğunu göstermektedir. Bulgular ayrıca kurumsal katılımın gerekliliğini de vurgulamaktadır. Yükseköğretim kurumları, adalar arası göçmen öğrenciler için koruyucu ilişkisel yapıları güçlendirmek amacıyla sosyal bağlantı fırsatlarını kolaylaştırmalı, psikososyal desteğe kolay erişimi sağlamalı ve düzenli iyi oluş değerlendirmeleri uygulamalıdır.

Anahtar Kelimeler: Dijital Aile Bağlari, Psikolojik Iyi Oluş, Adalar Arasi Göçmen Öğrenciler, Pozitif Psikoloji, Fenomenoloji.

Introduction

In a cross-cultural context, the educational mobility of university students is a growing social and demographic phenomenon. In Indonesia, the cultural and social practice of temporary migration for educational purposes is particularly significant. In 2022, more than 60,000 Indonesian students were enrolled in foreign educational institutions (GSL Global, 2025). Domestically, university enrollment is projected to reach 8.47 million in 2024, with a significant proportion of students living apart from their parents (Dataloka, 2024). National student mobility initiatives and government-supported higher education programs have further intensified domestic inter-island student movement across Indonesia (Kemendikbud, 2023). These trends highlight the importance of understanding the dynamics of domestic educational migration and the psychological well-being of migrant students (Fauzia & Komalasari, 2020).

Relocating to a different island within Indonesia presents unique social, cultural, and environmental challenges for students. Students moving to a different island must adapt to unfamiliar housing, climate, and local signage. They also face communities with distinct dialects and cultural practices, which can complicate social integration. The degree of adjustment required can make it difficult to integrate into a new community, school, or living environment, demanding substantial self-regulation and independence. This increased demand for independence may reduce immediate access to family support, potentially affecting both individual emotional stability and overall family cohesion. Loss of primary sources of support, particularly parental presence, has been shown to increase obstacles for migrant students and may contribute to dropout risk (Sari & Malahati, 2025). These challenges underscore the need to understand and develop strategies that help migrant students maintain emotional stability while living away from their families.

Digital communication technologies have transformed the way families remain connected across distances. Video calls, instant messaging, and social media facilitate emotional closeness despite physical separation. This study conceptualizes this phenomenon as digital family bonding, defined as digitally mediated interactions between students and their family members that sustain emotional closeness despite physical distance. In collectivistic societies such as Indonesia, where family ties serve as emotional and moral anchors and social support is highly valued, digital family bonding may play a crucial role. Studies on ICT and migrant populations indicate that digital communication can reduce stress and loneliness while enhancing social support and coping capacities (Taufani, 2025). These findings suggest that digital family bonding may help migrant students maintain relational continuity and psychological equilibrium.

From the perspective of positive psychology, digital family bonding can be further understood in relation to psychological well-being. Positive Psychology emphasizes individual strengths, positive relationships, and intrapsychic resources that enable flourishing rather than mere harm avoidance. Ryff's psychological well-being model identifies positive relations with others as a key contributor to well-being, alongside domains such as self-acceptance, environmental mastery, and life purpose, all of which are shaped by interpersonal quality. Through this lens, digital family bonding provides students with self-defining relationships that foster a sense of safety, belonging, and identity. Furthermore, Positive Psychology highlights resilience-the capacity to adapt constructively to adversity. Digital communication with family can serve as a source of resilience, providing emotional support and facilitating collective coping, thereby helping students maintain control during stressful experiences (Widiyastuti & Hardita, 2024).

Empirical research has begun to examine the effects of digital communication on relational quality in migrant families. Fauk et al. (2024) describe how Indonesian migrant workers use digital media to satisfy emotional needs, maintain emotional ties, and mitigate the psychological impact of isolation. Similarly, Taufani (2025) documents how migrant students interact digitally with family members to combat loneliness and foster emotional closeness. While these studies enhance understanding of technology-supported family relationships, there is a potential paradox: frequent digital communication may sometimes increase homesickness or emotional distress if interactions lack depth or emotional meaning (Fauzia & Komalasari, 2020; Sinaga et al., 2024) . This suggests that the psychological impact of digital connections depends more on interaction quality than frequency.

Despite these insights, several unresolved issues remain in the literature on migrant students, including conceptual, methodological, and cultural dimensions. First, there is a lack of systematic conceptualization and investigation of digital family bonding. While studies on social support and digital communication exist, digital interactions are often treated merely as forms of social support rather than culturally shaped relational processes grounded in emotional interdependence and the evolving nature of families (Rathakrishnan et al., 2021). Consequently, theoretical development of digital family bonding remains limited, with many of its components, processes, and psychological implications unexplored.

Second, an overreliance on quantitative survey models limits understanding of the phenomenological, lived experiences of migrant students. Quantitative approaches fail to capture how students interpret and emotionally engage with digital family communication, nor do they illuminate ambivalence, relational discrepancies, or identity fragmentation in online interactions (Supriyati, 2023). These dynamics reflect the non-linear, complex relational processes that shape digitally mediated family communication.

Third, the cultural specificities of collectivistic societies remain under-theorized in discussions of digital family bonding. Although some studies acknowledge interdependence and family closeness, few examine how these cultural orientations influence emotional expectations, familial responsibilities, and the psychological salience of digital ties (Barros, 2023). Migrant students from collectivistic backgrounds may experience digital communication differently than those in more individualistic contexts-a dimension often overlooked.

Finally, a theoretical gap exists in situating digital family bonding within the broader Positive Psychology framework. While literature addresses relational well-being, digitally mediated family relationships are rarely linked to constructs such as resilience, meaning, personal growth, and purpose (Chen & Billedo, 2025). Consequently, the psychological potential of digital family bonding-particularly its role in coping and adaptive functioning-remains underutilized.

These gaps collectively highlight the need for a deeper, nuanced understanding of digital family bonding in the lives of migrant students. To address these limitations, the present study employs a qualitative phenomenological approach to explore the essential lived experiences of university students in cultivating digital family bonding and examines its implications for their psychological well-being. By centering students' subjective interpretations and emotional worlds, this study contributes to theoretical development in three key ways: (1) elaborating the components and meanings of digital family bonding within a collectivistic cultural context; (2) illuminating how digital familial relationships function as psychological resources that sustain well-being and resilience; and (3) strengthening the integration of positive psychology and cyberpsychology in understanding migrant student experiences. Through this

study, we aim to enhance understanding of digital relationality and cultural dynamics among migrant students. The findings offer insights relevant for theory, practice, and policies supporting student well-being.

Method

Research Design

This study adopts a phenomenological research design to explore the essential lived experiences of inter-island migrant students. Phenomenology seeks to understand how individuals make sense of their experiences, emphasizing participants' subjective meanings while acknowledging the researcher's interpretative role. Accordingly, this study employed Interpretative Phenomenological Analysis (IPA), which involves a double hermeneutic process in which participants interpret their lived experiences and the researcher, in turn, interprets those interpretations (Creswell, 2021). The term "participants" is used to emphasize their active role in articulating and reflecting on their experiences within the context of digital family bonding. The purpose of this study was to understand the essence of students' experiences of digital family bonding and how these experiences shape their psychological well-being.

Inter-island migrant students experience geographical separation from their families and familiar social environments, which alters the availability of direct familial support. This study therefore focuses on how students perceive digitally mediated connectedness with their families, the emotional meanings they attach to these interactions, and the ways digital family bonding contributes to their psychological well-being and resilience in coping with academic and environmental stressors.

Participants

Twenty migrant students were purposively selected to participate in the study. This sample size aligns with the idiographic focus of IPA, which aims to explore phenomena in depth rather than for statistical generalization, while allowing identification of patterns across cases. The students were required to be: active students at the university, within the age limit of 18-25, residing independently from their nuclear family for one year, and employed in regular digital communication with their family.

The geographical diversity of the participants reflects internal migration patterns and provides a nuanced understanding of digital family connectedness across different cultural regions. The key characteristics of the participants have been summarised in the table below:

Table 1. Participants

No	Participants Code	Gender	Age	Region of Origin	Study Location	Long time living away from home	Dominant Communication Media
1	P01	Female	25	West Sumatra	Yogyakarta	6 years	WhatsApp, Video Call
2	P02	Male	20	Riau	Solo	2 years	WhatsApp, Zoom
3	P03	Female	21	East Kalimantan	Solo	3 years	WhatsApp, Instagram
4	P04	Female	22	South Sulawesi	Yogyakarta	4 years	WhatsApp, Telegram
5	P05	Male	23	West Nusa Tenggara	Malang	6 years	WhatsApp, Line
6	P06	Female	20	Papua	Yogyakarta	8 years	WhatsApp, Video Call
7	P07	Female	21	NTT	Semarang	3 years	WhatsApp, Messenger
8	P08	Male	19	Aceh	Bandung	2 years	WhatsApp, Instagram
9	P09	Female	25	Jambi	Yogyakarta	7 years	WhatsApp, Video Call
10	P10	Female	21	West Kalimantan	Semarang	2 years	WhatsApp, Telegram
11	P11	Male	22	Maluku	Jakarta	3 years	WhatsApp, Video Call
12	P12	Female	19	Lampung	Surabaya	5 years	WhatsApp, Instagram
13	P13	Female	24	Bali	Yogyakarta	2 years	WhatsApp, Line
14	P14	Male	21	South Kalimantan	Bandung	3 years	WhatsApp, Messenger
15	P15	Female	22	Southeast Sulawesi	Malang	5 years	WhatsApp, Video Call
16	P16	Male	23	Bangka Belitung	Jakarta	3 years	WhatsApp, Zoom
17	P17	Female	20	Bengkulu	Yogyakarta	4 years	WhatsApp, Instagram
18	P18	Female	21	North Kalimantan	Jakarta	3 years	WhatsApp, Telegram
19	P19	Male	22	Gorontalo	Semarang	3 years	WhatsApp, Video Call
20	P20	Female	19	West Sulawesi	Surabaya	4 years	WhatsApp, Instagram

Data Collection Procedures

Data were collected through semi-structured, in-depth interviews and limited participant observation. Interviews focused on participants' emotional experiences and relational dynamics of digital family bonding. Observations were conducted ethically to examine indicators of digital communication, including frequency, modalities, and response patterns. Specifically, the data collection involved:

1. Timeline and Structure : Although the data collection period spanned one year (January-December 2024), ach participant took part in 2-3 periodic interview sessions to capture the development of their emotional dynamics over time.

2. Duration: Each session lasted 60-90 minutes and was conducted either face-to-face or online via Zoom/Google Meet, depending on the participant's location.

3. Instruments and Sample Questions: The researcher served as the primary instrument, supported by a flexible Interview Guide, Field Notes, and Digital Audio Recorders to ensure thorough and accurate documentation of participants' narratives. Sample questions included:

    1) "Can you describe a moment when you felt very close to your family despite interacting only through a screen?" (Emotional meaning)

    2) "How did a video call affect your mood when you were stressed by academic tasks?" (Psychological impact)

Interviews were conducted either face-to-face or online, depending on participants' locations, with the researcher as the primary instrument, supported by an interview guide, field notes, and digital audio recording for accurate data capture.

Data Analysis

Following the systematic procedures of Interpretative Phenomenological Analysis (IPA) as outlined by Smith et al. (2009), the study employed the following steps to ensure a rigorous and transparent analysis of participants' lived experiences:

1. Immersive Reading: Interview transcripts were read multiple times to gain deep familiarity with each participant's lived context and to engage closely with how participants make sense of their lived experiences.

2. Initial Coding: Significant statements, expressions of emotion, and relational experiences were highlighted as initial codes. For example, codes such as *"missing home," "checking in via WhatsApp,"* and *"sharing daily routines"* were identified from participants' narratives.

3. Theme Development: Initial codes were clustered into broader conceptual themes. For instance, the codes above were grouped under the theme *"Maintaining Emotional Closeness through Digital Communication."* This step helped capture patterns across multiple cases while preserving individual nuances.

4. Cross-Case Analysis: Individual case analyses were conducted first to respect idiographic detail, followed by a cross-case comparison to identify convergent and divergent patterns in participants' experiences of digital family bonding. Differences and similarities in emotional responses, coping strategies, and digital communication habits were documented to contextualize findings culturally and regionally.

5. Theoretical Interpretation: Themes were interpreted through the lens of Positive Psychology and digital family connectedness. For example, the theme *"Maintaining Emotional Closeness"* was linked to psychological well-being constructs such as resilience, life satisfaction, and perceived social support.

To enhance rigor and credibility, the analytical process incorporated reflexivity and peer debriefing:

1. Peer Debriefing: Preliminary codes and themes were discussed with colleagues specializing in qualitative research and IPA, allowing assumptions to be questioned and interpretive bias minimized.

2. Reflexive Journaling: The researcher maintained a reflexive journal throughout data collection and analysis, documenting assumptions, emotional reactions, and potential biases that could influence interpretation.

This structured approach ensured that participants' voices remained central in the analysis, while theoretical interpretations were firmly grounded in the data. By combining idiographic attention with cross-case thematic insights, the study provides a nuanced understanding of how domestic migrant students experience digital family bonding and its psychological implications.

Trustworthiness

A number of different approaches were taken in order to ensure that the findings of this research were trustworthy.

1) Cross-participant thematic comparison and observational integration represented method and source triangulation.

2) Participants were presented synthesized interpretations to check the credibility of the accounts through member checking.

3) Within peer debriefing oversight of the analytical process, assumption questioning, and interpretive bias mitigation were completed through collaboration with colleagues possessing expertise in both qualitative research and IPA.

Reflexive journaling and audit trails were maintained throughout the study to enhance rigor and minimize researcher bias.

Results

Phenomenological analysis of interviews with twenty migrant students revealed four superordinate themes describing the meanings of digital family bonding and its impact on students' psychological well-being : emotional closeness through digital communication, digital psychological support, obstacles to family communication, and digital family bonding and resilience.

Emotional Closeness through Digital Communication

Participants consistently used digital communication-primarily video calls and instant messaging-as the primary medium to reproduce emotional closeness and recreate the warmth of home despite physical distance. Twelve participants highlighted that daily or weekly video calls became a crucial routine for mitigating longing and sustaining a sense of presence.

P01 (female, 25, West Sumatra) shared, *"Despite physical separation, I engage in nightly video calls with my mother, which helps me maintain a sense of familial presence and emotional stability."* P18 (female, 21, North Kalimantan) emphasized that family-involved video calls served as an important ritual that maintained her sense of belonging to household dynamics.

Instant messaging also played an essential role for eight participants. Brief but personalized messages-often containing motivational words or reminders-were perceived as emotionally potent signals of care. P09 (female, 25, Jambi) noted that *"Every morning, my mother sends a motivational message, which reinforces my sense of being cared for and supports my academic motivation."*

Many participants reported that these digital interactions reduced feelings of distance and loneliness, helping them feel part of a community. These interactions reinforce **Positive Relations with Others** (Ryff, 1989), showing that digital communication can recreate co-presence, foster belonging, and reduce loneliness

Digital-Based Psychological Support

Participants described two primary forms of psychological support transmitted digitally: Instrumental support and emotional support. Instrumental support was reported by ten participants and typically involved academic advice or motivational guidance offered through calls or messages. Such support strengthened students' confidence and facilitated academic coping.

P02 (male, 20, Riau) explained, *"When I was stressed about my thesis, my father always gave advice over the phone. It made me more confident and helped me know where to start."*

Similarly, P15 found that encouraging messages from her father helped her stay focused and prepared before major exams.

Emotional support, emphasized by 11 participants, manifested in simple gestures such as reminders to eat, prayers, or brief check-ins. These small actions were perceived as intimate demonstrations of affection and validation.

P04 (female, 22, Sulawesi) pointed out, *"My mother always reminds me to eat. Even though it's simple, it warms* my heart and makes me feel appreciated and cared for."

The combination of emotional and instrumental support provided students peace of mind and psychological comfort as well as a sense of having a safe place to land. Both forms of support enhanced emotional stability, self-confidence, and psychological comfort, aligning with multiple PWB domains, including self-acceptance, environmental mastery, and purpose in life.

Barriers to Maintaining Digital Family Communication

Despite the benefits of digital family bonding, participants encountered several challenges that reduced the quality and consistency of communication. These barriers were categorized into technical-practical obstacles and emotional-personal obstacles.

Technical-Practical Barriers: Poor internet connectivity and mismatched schedules disrupted consistency.

P03 (female, 21, East Kalimantan) shared, *"Sometimes the signal in my boarding house is terrible. The video call keeps disconnecting. It's frustrating and makes us end the call quickly."* And P10 echoed that misaligned schedules between her academic workload and her family's routines disrupted communication consistency.

Emotional-Personal Barriers: Delayed or brief replies sometimes led to misinterpretation or feelings of neglect.

P05 (male, 23, West Nusa Tenggara) explained, *"My parents are busy, so they often reply late. Sometimes it makes me feel less noticed, like they've forgotten about me."* P07 (female, 21, NTT) recalled misinterpreting a short text from her mother as anger, only to later realize it was due to fatigue.

These experiences indicate that digital communication, despite fostering connection, may simultaneously create emotional distance and misunderstandings due to asynchronous interaction and limited nonverbal cues, illustrating the Digital Paradox.

Meaning of Digital Family Bonding for Resilience

For several participants, digital family bonding provided psychological support that enhanced resilience during periods away from home. Nine participants reported that their main source of emotional strength was family contact maintained digitally.

P06 (female, 20, Papua) reflected, *"My family is my main source of motivation. Without digital communication, I might have given up. Knowing they're there, even just through a screen, is enough."* P01 (female, 25, West Sumatra) similarly described feeling psychologically secure because she knew that emotional support was always accessible online.

Moreover, seven participants indicated that family support digitally inspired them to commit to their studies and pursue their long term goals.

P16 (male, 23, Bangka Belitung) reported, *"Support from my family through chats and video calls makes me feel confident that I can graduate on time. It's like extra energy that reminds me why I'm here."* P18 highlighted the importance of rituals such as receiving prayers over the phone, which provided deep comfort during academic pressure and acted as an effective coping mechanism.

Overall, digital family bonding enhanced students' emotional stability, resilience, and psychological well-being, confirming the importance of meaningful digital interactions beyond mere frequency.

Table 2. Researchers' Analytical Interpretation

Theme & Subtheme	Representative Quotes	Interpretive Insights
Emotional Closeness through Digital Communication; Ritualized video calls; Affective micro-messages	"Despite physical distance, I maintain nightly video calls with my mother, which help sustain emotional closeness." (P01); "Morning motivational messages make me feel cared for." (P09)	Digital interactions recreate co-presence and strengthen family connections, supporting Positive Relations with Others (Ryff, 1989).
Digital-Based Psychological Support; Instrumental support; Emotional validation	"When I was stressed about my thesis, my father guided me through the phone, and I felt more confident." (P02); "My mother's reminders to eat warm my heart." (P04)	Provides practical coping resources and emotional reassurance, enhancing multiple PWB domains.
Barriers to Digital Family Communication; Technical constraints; Emotional misunderstandings	"The signal keeps disconnecting, so the call ends quickly." (P03); "Late replies make me feel less noticed." (P05)	Connectivity and asynchronous communication may create misunderstandings, reducing relational effectiveness.
Meaning of digital family bonding for Resilience; Motivation source; Academic purpose reinforcement	"Without digital communication, I might have given up." (P06); "Family support through chats makes me confident I can graduate on time." (P16)	Acts as a psychological safety net, enhancing resilience and reinforcing academic and personal goals.

Discussion

The present study aimed to explore the lived experiences of Indonesian inter-island migration students in cultivating digital family bonding and its implications for their psychological well-being. Through a phenomenological inquiry, the findings reveal how digital communication functions as a psychological resource that sustains students' emotional security, mitigates academic and social stressors, and reinforces resilience in the migratory context. Across the narratives, digital family bonding emerges not merely as a channel for informational exchange but as a technologically mediated emotional foundation that preserves familial attachment despite geographical separation. Four interrelated themes were identified: (1) maintenance of emotional closeness, (2) provision of digital psychological support, (3) barriers to remote communication, and (4) digital family bonding as a source of resilience. Together, these themes illustrate how digital technologies integrate into the broader ecosystem of student well-being.

Emotional Closeness Through Digital Communication

One of the most prominent findings was that daily interactions through video calls, voice messages, and texts were central to maintaining emotional closeness with family members. This aligns closely with Ryff (1989) positive relations with others, emphasizing the importance of warm, trusting relationships for psychological well-being. Students perceived digital relationships as sufficiently capturing the presence of family, reinforcing belonging, connectedness, and protection against psychological distress.

Recent studies support these findings. Wilczewski & Alon (2023) quantitatively demonstrated that digital communication enhances bonding social capital and subjective well-being among international students. In the collectivistic Indonesian context, family represents the primary social unit, and digital family bonding is a reflection of social expectations around mutual care (Malau & Abdullah, 2024). Digital technologies alleviate the emotional burdens of loneliness, homesickness, and identity conflicts.

The analysis also highlights that quality of interaction outweighs frequency. While some digital exchanges were described as sincere and emotionally meaningful, others were perceived as superficial or lacking depth. Emotional vulnerability, co-presence, and attentive listening are essential for meaningful digital family bonding, consistent with Ryff's construct of Positive Relations. This finding challenges overly optimistic views of digital communication by emphasizing that emotional intentionality is critical.

Building upon the established emotional bonds, digitally mediated support functions as a continuing resource for students' psychological stability and resilience.

Digital Forms of Psychological Support

Instrumental support (academic advice and motivational reminders) and spiritual support (care and encouragement) are the ways families offer psychological support digitally. These supports are synergistic in the psychological well-being of students by lowering stress and increasing self-confidence, and providing safety when faced with the stressors of academics.

This duality aligns with earlier research such as Taufani (2025), who documented increased emotional support with a decreased well-being deficit, and Widiyastuti & Hardita (2024), who showed social support was a determining participants' well-being among students living away from home. In Positive Psychology, the duality of support provided, instrumental and emotional, map on to different sections of Ryff's model. For example, Academic support from parents gives students direction and reinforces the Purpose in Life dimension. In contrast, frequent emotional support reinforces Self-Acceptance by nurturing the psychological stability, self-worth, and internal support.

From the perspective of the resilience theory, emotional support serves as a protective factor that bolsters students' capacity to manage stress, corroborating the findings of (Palimbu et al., 2025) who associate external emotional resources with adaptive functioning to a greater degree. This study contributes to this body of literature by demonstrating the support mechanisms that are dynamically adapted to digital environments, affirming digital family bonding as a psychologically meaningful, albeit technologically mediated, support system (Hofhuis et al., 2023).

Students' support needs varied according to geographic distance. Those originating from more distant regions reported a greater reliance on emotional support, whereas students from proximate regions emphasized instrumental support. This indicates that physical separation modulates emotional sensitivity and informs what support type is the most significant. This indicates that digital family bonding functions as a form of customized digital social support.

While these forms of digital support play a critical role in sustaining well-being, they are not without challenges; technological limitations and communication dynamics can impede the effectiveness of these supportive exchanges.

Barriers to Maintaining Digital Family Communication

Digital family bonding is not without limitations. Technical, temporal, and emotional barriers-including poor internet connectivity, mismatched schedules, delayed responses, and shallow interactions-disrupted communication consistency. Similar challenges were noted by Barros (2023) and Paez & Tan (2021).

The Emotional Distance Feedback Loop, consistent with Media Richness Theory, (Daft & Lengel, 1998), explains that low-richness media, such as texts, reduce emotional expression and non-verbal cues, increasing miscommunication and emotional ambiguity. Real-time communication paradoxically can create emotional silences, referred to as the digital paradox, where cues are filtered or lost.

These disruptions negatively affect environmental mastery and positive relations (Ryff, 1989), demonstrating that digital family bonding is not universally protective. Effectiveness depends on the balance between digital technology availability and emotional expectations.

Despite these disruptions and obstacles, students continue to derive meaningful psychological resources from their digitally mediated family connections, which contribute to resilience and adaptive coping strategies in the migratory context.

Meaning of Digital Family Bonding for Student Resilience

An essential conclusion that can be drawn from the phenomenological analysis is that inter-island migrant students derive particular forms of resilience from the bonding they do with their cyber families. Communication through devices offers a symbolic sense of 'home', which strengthens the students' determination, resilience, and steady emotional base during their studies. This closely correlates with the positive psychology theory of resilience and the broaden-and-build theory by Fredrickson (2001), which posits that positive emotions broaden behavioral repertoires and facilitate the development of coping resources.

Sinaga et al. (2024) and Fauk et al. (2024) suggest that reducing social isolation can enhance individual well-being. This effect is mediated through positive social capital bonding. The current findings extend these insights by demonstrating how digital family bonding eases students' challenges in the various phases of their university life (Apriani et al., 2025; Fauzia & Komalasari, 2020; Thomas et al., 2017). Early-phase students require greater emotional support to cope with adjustment challenges, whereas advanced students primarily rely on digital family support for motivation, reflecting increased autonomy in managing their academic and personal goals.

The dynamic nature of cyber-family relationships demonstrates that support functions adaptively, reflecting psychological needs over time. Furthermore, in collectivist Indonesian culture, family serves as a core source of duty, emotional attachment, and identity. Digital family bonding extends relational responsibilities rather than replaces physical presence, contrasting with individualistic societies where peer support often dominates. Taken together, these findings highlight the importance of cyber-family interactions in fostering resilience and emotional stability, and they provide a basis for practical interventions and academic exploration aimed at supporting students' well-being.

Practical and Academic Implications

The findings of this study offer several practical and academic implications. Facilitating structured conversations between students and family members about emotional experiences may reduce feelings of loneliness and enhance psychological well-being. Brief yet meaningful interactions, such as daily check-ins or motivational messages, may effectively mitigate feelings of social isolation. Additionally, institutions could provide remote support to families through digital counseling services and foster online community platforms that connect families of students, further reducing social isolation among participants.

From an academic perspective, the findings highlight the need to further explore both positive and negative dynamics of digital family relationships. These insights can be integrated with existing theories on positive digital relationships to refine and expand conceptual frameworks surrounding digital relationality. Research on digital relationships, culture, and Positive Psychology can be further developed to examine how cultural norms interact with technology-mediated family bonding.

For future research, increasing the number of participants in qualitative studies is recommended to enrich the depth and variability of insights. The current study's sample size limits the generalizability of conclusions, though it provides detailed idiographic understanding. Moreover, mixed-methods approaches combining qualitative and quantitative analyses could offer a more comprehensive understanding of digital family bonding. Finally, to capture culturally nuanced experiences, future studies should focus on populations from collectivistic societies, where family interdependence and digital communication play a critical role in psychological well-being.

Taken together, these insights underscore the centrality of cyber-family interactions in supporting psychological well-being, offering a foundation for concluding remarks and targeted recommendations for students, families, and institutions.

Conclusions and Recommendations

This phenomenological inquiry demonstrates that digital family bonding plays a crucial role in sustaining the psychological well-being of inter-island migrants within Indonesia. Four key findings emerged from this study: (1) the maintenance of emotional ties through virtual contact, (2) the provision of both instrumental and emotional support via digital communication, (3) the silences and disruptions in communication arising from geographical distance and technological limitations, and (4) the perception of digitally mediated connections as a source of psychological endurance and motivation. These findings indicate that digitally connecting with family and friends equips participants with resilience, a sense of purpose, and the ability to cope with loneliness and academic challenges.

This study contributes to the broader positive psychology literature by identifying digital family bonding as a mechanism through which positive relations with others (Ryff, 1989) are preserved, particularly in the context of student mobility within collectivist societies. A central takeaway is that the quality of digital communication, especially its emotional depth and authenticity, is more impactful than the quantity of interactions.

The findings also underscore the need for institutional involvement. Higher education institutions should facilitate social connection opportunities, ensure easy access to psychosocial support, and implement regular well-being assessments to strengthen protective relational frameworks for inter-island migrant students.

However, the study has limitations due to the small number of participants and the specific context. Future research is encouraged to include more diverse participants, utilize mixed-methods designs combining qualitative and quantitative approaches, and adopt cross-cultural perspectives. Such studies would deepen the understanding of digital family bonding and support the development of a more generalizable model for promoting the psychological well-being of students living away from home.

Declarations

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Digital Kindness and Mental Health in Afghan Instagram and Facebook Users

Dijital Nezaket ve Afgan Instagram ve Facebook Kullanıcılarında Ruh Sağlığı

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Abstract

This study explored how digital kindness relates to mental well-being, particularly in Afghanistan, focusing on active users of Instagram and Facebook, and including affect balance as a mediator. Using a descriptive-correlational approach, data were gathered from 400 active users of social media in Afghanistan, who were between 18 to 35 years old. Participants were selected purposively, and validated Persian-Dari versions of the Digital Kindness Scale, Mental Health Continuum Short Form (MH-C-SF), Positive and Negative Affect Schedule - Short Form (PANAS-SF) were administered. Using data analysis with Pearson Correlation Coefficient, it has been evident that there exists a significant positive relationship between digital kindness and mental well-being at $r = .667$, $p < .01$. Likewise, a significant positive relationship between digital kindness and affect balance has been found at $r = .581$, $p < .01$. Using Structural Equation Modeling, it has been confirmed that this significant association between digital kindness and mental well-being partially exists through the effect of affect balance, where direct effects exist between digital kindness and mental well-being at $\beta = .503$, $p < .001$, along with indirect effects at $\beta = .164$, $p < .001$. Thus, the findings indicate that digital kindness is a strong correlate of mental well-being in Afghan youth, and this association is partially explained through emotional balance.

Keywords: Digital Kindness; Mental Well-Being; Positive Emotions; Social Media; Positive Psychology

Öz

Bu araştırma, dijital nezaketin (çevrimiçi yardımsever davranışları algılama ve gerçekleştirme) ruhsal iyi oluşla olan ilişkisini, Afganistan özelinde, Instagram ve Facebook'un aktif kullanıcıları üzerinde odaklanarak ve duygusal dengeyi (olumlu ve olumsuz duygular arasındaki fark) bir aracı değişken olarak dahil ederek incelenmiştir. Betimsel-ilişkisel bir yaklaşım kullanılarak, Afganistan'da yaşları 18 ile 35 arasında değişen 400 aktif sosyal medya kullanıcısından veri toplanmıştır. Katılımcılar amaçlı örnekleme yöntemiyle seçilmiş ve Farsça-Dari diline uyarlanmış ve geçerliliği onaylanmış "Dijital Nezaket Ölçeği", "Ruh Sağlığı Sürekliliği Kısa Formu (MHC-SF)" ve "Olumlu ve Olumsuz Duygu Durumu Ölçeği Kısa Formu (PANAS-SF)" anketleri uygulanmıştır. Pearson Korelasyon Katsayısı kullanılarak yapılan veri analizi, dijital nezaket ile ruhsal iyi oluş arasında anlamlı bir pozitif ilişki olduğunu ($r = .667$, $p < .01$) ve benzer şekilde dijital nezaket ile duygusal denge arasında da anlamlı bir pozitif ilişki bulunduğunu ($r = .581$, $p < .01$) ortaya koymuştur. Yapısal Eşitlik Modellemesi kullanılarak, dijital nezaket ile ruhsal iyi oluş arasındaki bu anlamlı ilişkinin kısmen duygusal denge aracılığıyla gerçekleştiği doğrulanmıştır; dijital nezaketin ruhsal iyi oluş üzerinde doğrudan etkisi ($\beta = .503$, $p < .001$) olduğu gibi, duygusal denge aracılığıyla dolaylı bir etkisi ($\beta = .164$, $p < .001$) de bulunmaktadır. Sonuç olarak, dijital nezaket davranışlarında bulunmanın, Afgan gençlerinin ruhsal iyi oluşuyla güçlü bir şekilde ilişkili olduğu ve bu ilişkinin kısmen duygusal denge aracılığıyla gerçekleştiği sonucuna varılmıştır.

Anahtar Kelimeler: Dijital Nezaket; Ruhsal İyi Oluş; Olumlu Duygular; Sosyal Medya; Pozitif Psikoloji.

Introduction

In recent years, the rapid growth of social media such as Instagram and Facebook has changed the way people communicate, show feelings, and feel mentally across societies. These social media platforms are not just for chatting, but also a place where people act in many ways—ranging from harmful actions like online bullying or mean comments, to good actions like helping others, showing care, and encouraging friends (Valkenburg & Peter, 2013). Among these behaviors, a new trend called digital kindness has attracted the attention of researchers in positive psychology and online communication. Digital kindness refers to things people do online to make others feel good, such as sending nice messages, replying kindly, helping people in need, and sharing positive content (Lysenstøen et al., 2021). International studies have shown that engaging in kind behaviors, whether in the offline world or online, can improve happiness, life satisfaction, and feeling that life has purpose (Fredrickson, 2001; Rowland & Curry, 2019). According to the Fredrickson's idea that positive emotions help people grow and build personal resources, positive emotions resulting from kind behaviors broaden individuals' thought-action repertoires and strengthen their cognitive, social, and psychological resources over time(Fredrickson, 2004). Consequently, it is expected that digital kindness may also contribute to users' mental well-being through the enhancement of positive affect, social connectedness, and a sense of meaning (Zhang et al., 2022).

While social media adoption has surged among Afghans in recent years, little is known about how online behaviors like digital kindness relate to mental well-being in this distinct cultural setting. The digital world, in this sense, provides global reach in a context that is marked by stress, social pressure, and life difficulties to Afghan youth who are active users of social sites such as Instagram and Facebook. The contextual issues might influence the strength of the association between social media on mental health greater in relation to its possible risks and opportunities in relation to mental health in the said context. In this context, social media use may show a stronger correlation with individuals' mental and emotional states and in life—as both something which could make people feel anxious or isolated and something that could help other people and connect to other people online. Although there have been numerous studies in Western societies that have investigated the psychological consequences of social media use (Lutz et al., 2020; Verduyn et al., 2017), there are still limited studies in relation to developing countries like Afghanistan. Furthermore, most studies have primarily emphasized the negative consequences of social media use (e.g. Internet addiction or depression caused by social comparison) instead of its positive aspects or effects; that is, kindness online. Therefore, the present study aims to fill this scientific gap by investigating the relationship between being kind online and feeling mentally well among active Afghan users on two major platforms—Instagram and Facebook. Drawing on the theoretical framework of positive psychology and models of online prosocial behavior (Erreygers et al., 2018), this study seeks to demonstrate how simple daily acts of helping or encouraging others online can play a significant role in enhancing mental well-being within a unique social and cultural environment, such as Afghan society.

Theoretical Framework and Literature Review

The Concept of Digital Kindness and Online Prosocial Behaviors

The concept of digital kindness involves various acts that are performed in social media platforms, which aim to make people feel good, heard, and cared for by the people they interact with within these platforms (Lysenstøen et al., 2021). Such acts involve actions like posting nice comments, posting understanding comments, especially if someone needs help, and posting good pieces. Digital kindness can be seen as

part of helpful online behaviors, a concept first introduced by Erreygers et al. (2018), which refers to things people do online to help others or make a positive difference on the community. Recent studies have shown that individuals who engage in such behaviors feel more valued, meaningful, and satisfied with life (Rowland & Curry, 2019). Indeed, online acts of kindness can work in similar ways of prosocial behaviors in the offline world—namely, strengthening social connections, increasing positive affect, and supporting mental health (Zhang et al., 2022). In the Afghan social and cultural setting, where traditional ways people support each other have weakened over time due to social problems, migration, and financial difficulties, the positive actions in digital spaces can help replace in-person interactions and as an important way to rebuild shared support and hope.

Fundamental Theories of the Study

Broaden-and-Build Theory of Positive Emotions

The Broaden-and-Build Theory, first proposed by Barbara Fredrickson (2001), is a an important theory in positive psychology. It says that positive emotions not only create good feelings in the moment but also help people think differently and respond better and build personal strengths over time for handling stress. Within this framework, digital kindness can create positive feelings, as users who give or receive these actions feel meaningful, connected, and valued, which helps improve mental health (Fredrickson, 2004). Research has also shown that even observing the presence of kindness online can produce similar positive emotions (Fryburg et al., 2021). The process between online kindness and the enhancement of mental well-being can thus be formally proposed as the following: Digital Kindness × Positive Emotions; Positive Emotions enhance the sense of connectivity, improving mental health over time.

Uses and Gratifications Theory

The Uses and Gratifications Theory (Katz et al., 1973) suggests that people use media to meet certain needs. In the context of social networks, this theory helps explain why people use in online interactions. Individuals may use social media to feel accepted by others, show who they are, or help other people (Whiting & Williams, 2013). From this perspective, digital kindness can be seen as a response to inner needs such as connection, caring for others, and personal growth. When these needs are met through kind and helpful actions, they have a positive effect on mental health (Morris et al., 2018).

Literature Review

In fact, a body of recent research has explored the correlation between online prosocial behaviors and mental well-being indicators, and it suggests that these activities are effective at promoting positive emotions, life satisfaction, and feelings of meaning in life for users. For instance, Erreygers et al. (2018) in a series of studies with European students, participation in online prosocial acts was associated with more meaning, life satisfaction and positive affect, and Lysenstøen et al. (2021) framed digital kindness as an independent factor of online social behavior and showed that this form of communication simultaneously increases feelings positive self-worth and mental calmness. Additionally, Zhang et al. (2022), in a Korean youth sample found that digital kindness plays a significant role in high levels of the aforementioned positive well-being dimension, and this impact is mediated by perceived social connectedness whereas Rowland and Curry's (2019) research indicated that we can increase happiness and subjective well-being through serial doing kindness behaviors between baseline and follow-ups.

These results together suggest that, in developed countries, online positivity may stand to take on a parallel psychological role as offline prosocial behaviors and have potentially significant salutogenic effects. In the Asian and Middle Eastern cultures, there is a paucity of research on L2 motivation but studies conducted so far are encouraging. For example, Morris et al. (2018) found that positive socialmedia use, including encouraging and supporting others, correlates with psychological well-being indicators, and a cross-national study by Weber et al. (2022) revealed that the effects of social media on mental health depend on the type of user interaction; social and supportive usage yields positive outcomes, while comparative or passive usage may be detrimental. In Afghanistan, there are very few direct studies conducted; nevertheless, in a survey conducted among Afghan youth, it was found that social media use has a positive correlation with a sense of belonging as well as social support; yet, overuse or exposure to negative contents leads to anxiety as well as mental fatigue. Locally conducted research also shows that cyberspaces are not only used as a recreational platform but also because they act as substitutes for a lack of physical interactions, expression of emotions, as well as the reception of social support among Afghan youth (Almaaitah & Bayraktar, 2025). Combining these findings, there are indications that online kindness is potentially linked to higher levels of positive affect states as well as mental wellness in every cultural setting. Yet, there have not been any systematic investigations conducted thus far on the direct correlation between cyberspace kindness activities and mental wellness among Afghan social media users. Thus, the present study will be conducted on the two most frequently accessed platforms in Afghanistan: Instagram and Facebook, attempting to address through empirical-statistical research whether online kindness has the potential for mental wellness in the Afghan setting.

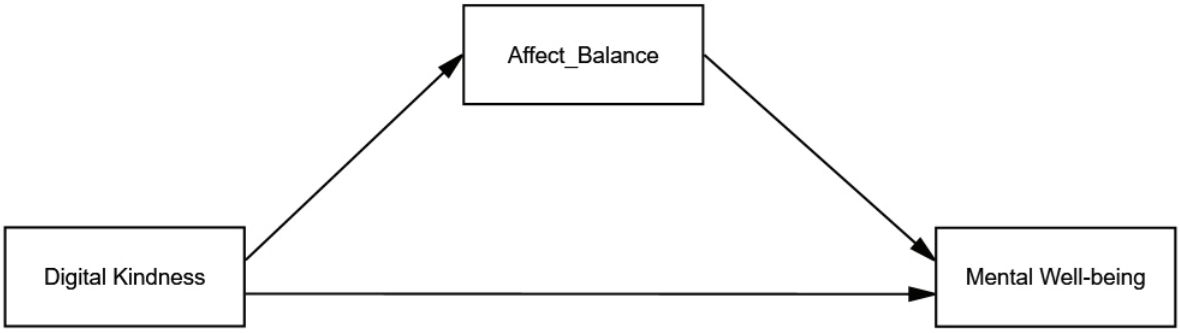

Figure 1. The Proposed Conceptual Model of the Study

Method

Research Design

This study employed a descriptive-correlational design to examine the relationship between digital kindness and mental well-being among active Afghan social media users on Instagram and Facebook. Since the aim was to identify relationships between variables without manipulation, a survey method was employed using standardized questionnaires, with data analyzed through correlation, multiple regression, and structural equation modeling (SEM) (Creswell, 2014).

Population and Sampling

The target population was all active users of Instagram with around 5.3 million members, and Facebook with around 2.1 million members, all being social media active until 2025, with a dominant age group between 18 to 35 years. The targeted sample using a purposive, non-probability sampling method involved 400 participants who fulfilled the criteria for selection, which included those who have an active account in any social media account, the duration for use a minimum of one year, and they have been active in social media for a least a period of one hour per day. The required sample was determined using Cochran formula for 95% confidence levels. For the purpose of increasing representation, a focus was put on including both men and women, with a view to incorporating participants originating from various parts of Afghanistan, which included Kabul, Herat, Kandahar, Mazar-i-sharif, Nangarhar, Badakhshan, Bamyan, as well as Ghazni. Given the online and purposive nature of sampling, the participants are not a statistically representative sample of all Afghan social media users, but rather represent a segment of active, accessible, and willing users.

Data Collection Instruments

Digital Kindness Scale

Digital kindness is assessed by a scale adapted from the Online Prosocial Behavior Scale (OPBS), designed by Erreygers et al. (2018). This adapted scale, called the Digital Kindness Scale, has a two-component subscale format with a total of 10 items: performing online prosocial behavior (5 items) and receiving online prosocial behavior (5 items). The scale is a 5-point frequency format, answered from 1 (Never) to 5 (Every day), providing a total possible score range from 10 to 50. The Persian-Dari version is translated by a forward and backward procedure. Its content validity is verified by three academic experts. In this study, the adaptation showed excellent internal consistency (Cronbach's alpha = 0.93).

Mental Health Continuum – Short Form (MHC-SF)

Participants mental health status was measured through the "Mental Health Continuum-Short Form" developed by Keyes in (2002). The scale contains a total of 14 items in which the aspects of mental health of three dimensions are included: Emotional Well-being (3 questions), Psychological well-being (6 questions), and Social well-being (5 questions). Participants were asked to what extent they have been exposed to each item in a month through a 6-point scale from "0 - Never" to "5 - Every Day." The full score of the scale is achievable through a total of 0 to 70 points. The scale has been pre-tested to be valid in the Persian-Dari version. In addition to that, its internal consistency was also high with a value of Cronbach's alpha = 0.94 in our study.

Positive and Negative Affect Schedule – Short Form (PANAS-SF)

The Positive and Negative Affect scale was administered using the Short Form of the Positive and Negative Affect Schedule, which is the PANAS-SF. This was adapted from the Original form of this scale designed and developed by Watson et al. (1988). This questionnaire comprises 10 items where 5 are related to positive affect (interested, excited, determined) and 5 to Negative Affect (upset, nervous, afraid). The questions aim to measure to what extent the respondent has/had this feeling for the last month through a Likert Item of 5 points that varies from 1 (Very slightly or not at all) to 5 (Extremely). The scores for this type of questionnaire range from 5 to 25 for both positive and Negative Affect respectively. The

Persian-Dari version of this questionnaire was kept prepared through the Forward and Back translation procedure. The content validity also was checked through this procedure. The Cronbach's alpha for this questionnaire was 0.86 for the positive and 0.73 for Negative Affect.

Data Collection and Analysis

The online questionnaire was powered through Google Forms. Prior to the measurement, all respondents were always informed about the purposes of the study and the guarantees of data confidentiality. Data analysis was carried out by means of SPSS 26 and AMOS 24. The analysis involved descriptive statistical analysis (means, standard deviation, frequencies), Pearson correlation to examine the correlation between variables. Multiple regression analysis to examine the extent to which digital kindness is associated with mental well-being. And Structural Equation Modeling to evaluate how well the theoretical mediating model fits. The level of significance was p=.05.

Ethical Considerations

The study was carried out in accordance with the Declaration of Helsinki (World Medical Association, 2013). Ethical approval was obtained from the Research Ethics Committee, Faculty of Psychology and Educational Sciences, Kabul University (Protocol Number: 05/ETC/FPES/2025; Date of Approval: September 29, 2025). Prior to their participation, all respondents were directed to read the first page of the online survey, wherein they were made aware of the purpose of the study, the procedures employed, and the importance of confidentiality. Respondents were also made aware of their right to withdraw at any stage of the study. In sending and submitting the online questionnaire, it was deemed that implied informed consent was given. Anonymity was guaranteed through setting up the online data collection tool (Google Forms) to not collect any identifiable information (e.g., name, email, IP addresses). The collected data will only be used for scientific purposes, which will add to the knowledge base regarding online behavior and mental health in the Afghan context. There were no incentives given for the participants, and the risk was low since only psychological scales were administered.

Results

The data obtained from the sample consists of 400 completed surveys with valid data. The data are presented in Table 1. The demographic characteristics of the sample indicate that most participants were young adults (Age 18-34) (85%) with at least a bachelor's degree, which is representative of the demographic characteristics of all active social media users in Afghanistan according to DataReportal (2024). suggesting our sample has relevance to this population. The sample was balanced with 52% of respondents being female and 48% being male. Among the respondents, Instagram alone was the most preferred social media platform (40%), while 34% prefer equally the use of both, and then followed by the use of Facebook alone at 26%. The average amount of time spent on social media activity was 3.2 hours per day. Thus, the selected study participants in Afghan users are mainly constituted of young and educated individuals.

Table 1. Demographic Information of Participants (N=400)

Characteristic	Category	Frequency	Percentage
Gender	Female	208	52.0%
	Male	192	48.0%
Age Group	18-24	177	44.2%
	25-34	207	51.8%
	35+	16	4.0%
Main Platform	Instagram Only	160	40.0%
	Facebook Only	104	26.0%
	Both equally	136	34.0%
Average Daily Use	—	3.2 hours	—

Descriptive statistics for all the study's variables are shown in Table 2. The respondents scored moderately on digital kindness (M = 28.67, SD = 6.09) and mental well-being (M = 34.33, SD = 9.28). The mean values for positive and negative emotions rated from 1–5 scales were found at 3.02 (SD = 0.59) and 3.15 (SD = 0.49) respectively. The balance obtained from the positive and negative emotions shown by the participants had a slightly negative mean value (M = -0.14, SD = 1.05); hence, it may be interpreted that there was an excess in negative emotions in the respondents' feelings. The values shown in all cases demonstrated adequate normality with values within the recommended -2 and +2 for skewness and -5 and +5 for kurtosis, respectively.

Table 2. Descriptive Statistics Among Variables (N=400)

Variable	Min	Max	Mean	*SD*	Skewness	Kurtosis	Reliability(α)
Digital Kindness	12	47	28.67	6.09	0.04	0.08	0.93
Mental Well-being	8	59	34.33	9.28	-0.12	-0.21	0.94
Positive Affect	1	4.80	3.02	0.59	-0.13	0.37	0.86
Negative Affect	1.60	4.80	3.15	0.49	0.09	0.64	0.73
Affect Balance	-3.80	3.20	-0.14	1.05	-0.13	0.58	—

Note. PA and NA measured on 1–5 scale; Affect-Balance = PA − NA.

Pearson Correlation test results showed positive and significant links between digital kindness and mental well-being, r = .667, p < .01; and between digital kindness and affect balance, r = .581, p < .01. Positive and significant links were noted between mental well-being and affect balance, r = .575, p < .01 as shown on Table 3.

Table 3. Correlations Among Variables (N=400)

Variable	1	2	3
Digital Kindness	—		
Mental Well-being	.667**	—	
Affect_Balance	.581**	.575**	—

Note. **$p < .01$ (2-tailed).

Path analysis was conducted using AMOS 24 software to test the significance of the mediating factor of affect balance between the relationships of digital kindness and mental well-being. Good fit index of the model $\chi^2/Df = 1.85$, CFI = 0.99, TLI = 0.98, and RMSEA = 0.04. The significance of the indirect effect was tested using bootstrapping with 5,000 resamples. A substantial direct association was found between digital kindness and mental well-being ($\beta = .503$, $p < .001$). Digital kindness was significantly associated with affect balance ($\beta = .581$, $p < .001$). Affect balance was positively related to mental well-being ($\beta = .282$, $p < .001$). The relationship between affect balance and mental well-being, as a mediator, was found to be substantial ($\beta = .164$, $p < .001$). The total effect of digital kindness on mental well-being was significant ($\beta = .667$, $p < .001$), while 33.7% of affect balance variance was explained, and 49.8% of mental well-being variance was explained (Table 4).

Table 4. Standardized Direct, Indirect, and Total Effects

Outcome	Predictor	Direct Effect	Indirect Effect	Total Effect
Affect_Balance	Digital Kindness	.581***	—	.581
Mental Well-being	Digital Kindness	.503***	.164	.667
Mental Well-being	Affect_Balance	.282***	—	.282

Note. ***$p < .001$

Figure 2 shows the final structural model with standardized coefficients to illustrate the significant paths and substantiate that the relationship between digital kindness and mental well-being is partially mediated by Affect_Balance.

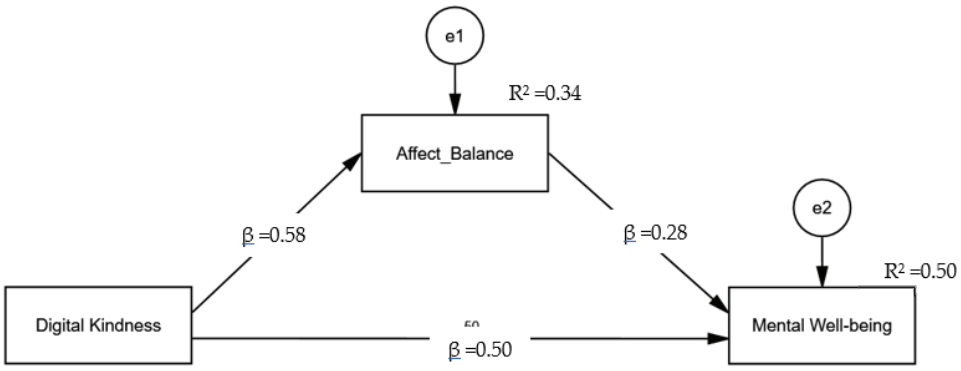

Figure 2. Structural Equation Model for the Relationship Between Digital Kindness, Affect_Balance, and Mental Well-being (Standardized Coefficients).

Discussion

The findings of this particular study will serve as potent empirical support for the strong positive correlation between kindness online and mental well-being among active Afghan social media-using populations and will thus have answered the first research question of this proposed study affirmatively. The strong positive correlation between kindness online and mental well-being (i.e., r = .667) indeed resonates and builds upon the international body of research with regard to prosocial online behaviors (Erreygers et al., 2018; Zhang et al., 2022). From an epistemological point of view, such an association can be explained with reference to strong empirical support offered by Fredrickson's (2001) Broaden-and-Build theory of well-being. Indeed, it can be argued that engagement in digital kindness, such as sending supportive messages or sharing encouraging information, is associated with the experience of short-term positive emotions such as warmth, satisfaction, or joy in one individual. As proposed in the theory, having such short-term positive emotions is linked to broader one's short-term thought-action-couple networks, thus encouraging one's exploration in general or social conduct in particular. Specifically, such an increase is consistent with the development of long-term constructive psychological resources such as social affiliation or robustness, both of which can be seen as substantive dimensions of well-being from an MHC-SF perspective in particular (Keyes, 2002). Indeed, direct support is offered with regard to such an assumption in the present path analysis results, suggesting an indirect relationship between digital kindness and well-being via affect balance in particular (β = .164 for the indirect relationship).

The findings also resonate with the Uses and Gratifications Theory by Katz et al. (1973): Afghan users seem to actively use social networking sites to satisfy basic psychological needs for relatedness, competence (through helping others), and meaning. In a collectivist society exhausted by decades of war, displacement, and economic adversity-where, in effect, the conventional structures of support are so often torn apart-digital spaces become critical alternative sites for social contact. Acts of kindness online directly align with the fulfillment of these needs for altruism and social incorporation, and correlate with increased life satisfaction and psychological well-being, as indeed has been seen in other collectivist cultures (Morris et al., 2018). One of the more intriguing findings that touched upon a particular nuance had to do with the emotional landscape of the participants. Unlike previous assumptions that suggest a bipolar range on a spectrum between positive or negative emotional experience within relation to human beings, it appeared that this particular group of participants evidenced a concurrent experience of both moderately-to-highly positive affect (M=3.02) and moderately-to-highly negative affect (M=3.15), leading to a somewhat negative experience balance score for this group (-.14). This co-activation may suggest that Afghan youth experience a complex emotional landscape that possibly comes by virtue of navigating a world that has been experiencing a great degree of socio-political upheaval during their lifetime. It may suggest that an experience that involves a great degree of hope, feeling connected to one another, or feeling joyful may co-occur with a certain underlying or hidden anxiety or fear experience. This analysis further underlines the principle of "quality over quantity" in social media use. Whereas the frequency of daily use was negligibly related to well-being directly, such quality of interaction, as manifested in the engagement with digital kindness, showed a strong association with well-being. This dichotomy supports the differential susceptibility model of media effects, Valkenburg & Peter (2013), which says that not all psychological effects of social media use are the same but rather depend critically on the nature of the user's activities. Proactive, other-focused use is well-being enhancing, whereas passive, comparative, or conflict-oriented use is likely to be stress-enhancing-a dynamic particularly salient in a fragile context.

From a cultural point of view, these studies can be considered highly important, especially if social interaction in Afghanistan is encompassed. In this war-torn nation, there is a scarcity of traditional psychosocial help. Digital kind gestures go beyond directions of appropriate online conduct. Digital kind gestures may represent a form of prosocial engagement with potential value in an otherwise challenging social interpersonal space. Such an intervention could be encouraged within digital literacy initiatives, especially if centered upon prosocial initiatives aimed at youth.

Conclusions

This study offers strong empirical validation for the role of digital kindness as an important positive correlate of mental well-being for the younger segment of Afghan social media users of Instagram and Facebook. The study's results verify and expand the applicability of positive psychology constructs to the digital behavior of a population that is non-Western and living within a state of crisis in the region. Most notably, the present study demonstrated the partial mediation effect of affect balance for the relationship between digital kindness and well-being, confirming the proposed process based upon Broaden-and-Build Theory by Fredrickson to explain the observed relationship between digital kindness behavior and well-being outcomes through the balance of positive affective states with negative states. A secondary research theme, vital to the study, has also been brought to light. This is in terms of the co-occurrence of moderately high and negative affect in the participants. This complex emotional state may therefore imply that for young Afghans, well-being in the face of chronic adversity is not just the opposite of negative affect, but is in fact intertwined in a complex fashion with anxiety/stress, and experiences of connection/happiness/good deeds facilitated by the internet.

Suggestions for Future Research

1. Examine the subjective dimensions, motivations, and cultural nuances of digital kindness in Afghanistan by using the framework of mixed methodologies, case studies, and/or digital ethnography research.

2. Conduct longitudinal research to investigate issues of temporal priority and long-term consequences of digital kindness.

3. Explore other mediation and modulation variables, such as perceived social support, experience of meaning, offline prosocial behavior, and trauma-related content.

4. Examine the strong positive correlation with negative affect in more detail. Research should assess the degree to which this is due to the artifact, emotional granularity, and a certain style of coping.

5. Include other popular social platforms (e.g., TikTok, Telegram), and include other demographics such as various age levels, rural areas, and the Afghan diaspora, which would improve generalization.

6. Design and test experiments to test their association with potential improvements in levels of well-being and thwarting online negativity.

Limitations

1. Cross-Sectional Design: The study design does not lend itself to making causal conclusions. The associations are correct, both logically and conceptually.

2. Self-Report Bias: There is the possible threat of bias in self-reported data in terms of common method variance and/or social desirability bias.

3. Sampling Limitations: The study employed an online, purposive, non-probability sampling method. Therefore, the participants are not a statistically representative sample of all Afghan social media users, but rather represent a segment of active, accessible, and willing users. While attempts were made to include participants from various regions, it is likely that individuals with limited internet access, lower digital literacy, or those residing in highly insecure areas are underrepresented. Consequently, the findings should be generalized to the broader population with caution.

4. Platform Specificity: The results only apply to Instagram and Facebook. Behavior and impact could vary on other platforms, especially those that are newer or more private.

5. Cultural Specificity of Constructs: Though there was translation and validation of scales, the construct knowledge of "kindness" and "well-being" might have culturally distinct associations within Afghanistan's ethnically and linguistically varied communities.

Declarations

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***Plagiarism Checks*:** Yes- Turnitin

AI Use Disclosure: Authors are required to disclose any use of artificial intelligence (AI) tools in the preparation of the manuscript. Authors remain fully responsible for the content of their work. No artificial intelligence-based tools or applications were used in the preparation of this study. All content of the study was produced by the author in accordance with scientific research methods and academic ethical principles.

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Caregiver-Youth Shared Recreation and Adolescent Well-being: The Moderating Roles of Motivation, Mindset, and Parenting Style

Bakımveren–Genç Ortak Rekreasyonu ve Ergen İyi Oluşu: Motivasyon, Zihniyet ve Ebeveynlik Stilinin Düzenleyici Rolleri

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Abstract

Adolescence represents a critical developmental period for establishing well-being patterns that extend into adulthood. While recreational engagement supports youth development, how caregiver involvement influences these outcomes remains underexplored. This study examined whether personal and relational factors moderate the association between caregiver–youth recreational engagement and adolescent well-being. A cross-sectional survey of 398 adolescents (216 male, 182 female) aged 14–18 across five Western nations assessed psychological distress, attachment security, motivation, goal orientation, mindset, and perceived parenting style. Drawing on attachment theory, self-determination theory, and self-expansion theory, 56 moderation analyses were conducted across motivational, cognitive, and parenting-related moderators. To control for inflated Type I error due to multiple testing, a Benjamini–Hochberg false discovery rate correction was applied across all interaction terms. Following correction, four interaction effects remained statistically significant. External regulation consistently moderated associations between recreational engagement and psychological distress, such that greater caregiver involvement was linked to higher depression, anxiety, and stress among youth whose participation was externally pressured. In addition, authoritative parenting moderated the association between recreational engagement and attachment, with stronger attachment observed in autonomy-supportive parenting contexts. Other nominal interaction effects did not remain significant after correction and should be interpreted as exploratory. Overall, findings suggest that caregiver–youth recreation is a context-dependent process, with motivational and relational quality shaping modest links to adolescent well-being.

Keywords: Youth Well-Being, Recreational Engagement, Attachment, Motivation, Parenting Style

Öz

Ergenlik, yetişkinliğe uzanan iyi oluş örüntülerinin şekillendiği kritik bir gelişim dönemini temsil eder. Rekreasyonel katılım gençlerin gelişimini desteklese de, bakım verenlerin bu süreçteki rolünün sonuçları nasıl etkilediği yeterince araştırılmamıştır. Bu çalışma, bakım veren–ergen rekreasyonel katılımı ile ergen iyi oluşu arasındaki ilişkinin kişisel ve ilişkisel faktörler tarafından düzenlenip düzenlenmediğini incelemiştir. Beş Batılı ülkede 14–18 yaş aralığında 398 ergenle (216 erkek, 182 kız) yürütülen kesitsel bir anket çalışmasında psikolojik sıkıntı, bağlanma güvenliği, motivasyon, hedef yönelimi, zihniyet ve algılanan ebeveynlik tarzı değerlendirilmiştir. Bağlanma kuramı, öz-belirleme kuramı ve öz-genişleme kuramına dayanarak motivasyonel, bilişsel ve ebeveynlikle ilişkili düzenleyiciler kapsamında 56 moderasyon analizi gerçekleştirilmiştir. Çoklu testlerden kaynaklanan artmış Tip I hata olasılığını kontrol etmek amacıyla tüm etkileşim terimlerine Benjamini–Hochberg yanlış keşif oranı düzeltmesi uygulanmıştır. Düzeltme sonrasında dört etkileşim etkisi istatistiksel olarak anlamlı kalmıştır. Dışsal düzenleme, rekreasyonel katılım ile psikolojik sıkıntı arasındaki ilişkide tutarlı bir düzenleyici olarak ortaya çıkmış; bakım veren katılımı, etkinliğe dışsal baskı nedeniyle katılan gençlerde daha yüksek depresyon, kaygı ve stres düzeyleriyle ilişkili bulunmuştur. Ayrıca, otoritatif ebeveynlik rekreasyonel katılım ile bağlanma arasındaki ilişkiyi düzenlemiş; daha özerklik destekleyici ebeveynlik bağlamlarında daha güçlü bağlanma gözlenmiştir. Düzeltme sonrasında anlamlılığını korumayan diğer nominal etkileşim etkileri keşfedici nitelikte değerlendirilmelidir. Genel olarak bulgular, bakım veren–ergen rekreasyonunun bağlama duyarlı bir süreç olduğunu ve motivasyonel ile ilişkisel niteliğin ergen iyi oluşuyla olan mütevazı bağlantıları şekillendirdiğini göstermektedir.

Anahtar Kelimeler: Genç İyi Oluşu, Rekreasyonel Katılım, Bağlanma, Motivasyon, Ebeveynlik Stili

Introduction

Adolescence represents a critical developmental period for establishing well-being patterns that extend into adulthood. During these formative years, youth develop coping strategies, relational skills, and self-regulatory capacities that influence long-term psychological health (Copeland et al., 2021). While mental health challenges affect approximately one in seven adolescents globally (World Health Organization, 2021), this period also presents significant opportunities for promoting resilience, positive development, and family connection through accessible, everyday strategies. Understanding how to optimize these developmental supports is essential for fostering adolescent well-being across diverse contexts (Lerner et al., 2018).

Within the field of positive psychology, growing attention has been given to identifying everyday pathways to enhance well-being (Seligman, 2011). Shared recreational activities may represent a relational context through which youth and their caregivers can cultivate connection, competence, and joy-core components of well-being (Keyes, 2002; Ryan & Deci, 2001).

Recreational engagement—defined here as the active participation in leisure activities such as sports, art, dance, or nature-based play—represents a promising and accessible pathway for enhancing adolescent well-being. Research demonstrates that youth involved in recreational activities report higher self-esteem, better psychosocial functioning, and greater life satisfaction (Adachi & Willoughby, 2014; McMahon et al., 2017). Beyond reducing symptoms of depression and anxiety (Boone & Leadbeater, 2006), recreation supports positive youth development by building competence, fostering social connection, and providing contexts for identity exploration (Zarrett et al., 2009). Importantly, youth engaged in organized recreation demonstrate enhanced coping skills and lower engagement in risky behaviors (Miller & Hoffman, 2009; Pedersen et al., 2017), suggesting recreation's potential as a protective development resource.

While structured therapeutic programs such as wilderness and adventure therapy have successfully harnessed recreational activities to promote youth well-being (Hoag et al., 2014; Gass et al., 2012), these interventions remain expensive, physically demanding, and limited in accessibility. In contrast, everyday recreational activities shared within families represent an underexplored, yet promising, avenue for enhancing youth well-being with the potential to strengthen caregiver-youth bonds and support positive development. Given that secure caregiver relationships are foundational to adolescent well-being (Bowlby, 1988) and that family-based interventions offer scalability advantages (Kumpfer & Alvarado, 2003), understanding how caregiver involvement in recreation influences youth well-being outcomes represents an important gap in positive youth development research. Such knowledge could inform the development of low-cost, relationally grounded strategies that are accessible across diverse family and community contexts.

Purpose and Hypotheses

This study investigated whether recreational engagement between youth and caregivers promotes youth well-being, defined as lower levels of psychological distress (i.e. depression, anxiety, and stress) and higher levels of perceived attachment. Specifically, the study examined how individual and relational factors—motivation, goal orientation, mindset, and perceived parenting style—moderate this relationship. These variables were selected for their theoretical relevance to attachment theory, self-determination theory, and self-expansion theory.

According to attachment theory (Bowlby, 1988), emotionally attuned interactions with caregivers foster a sense of security and trust. Recreational engagement may reinforce secure attachment, particularly when the caregiver is perceived as warm, responsive, and autonomy-supportive- hallmarks of an authoritative parenting style (Baumrind, 1971;1991; Steinberg, 2001).

From the lens of self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000), youth are expected to experience higher well-being when recreational engagement satisfies their core psychological needs for autonomy, relatedness, and competence. Adolescents are intrinsically motivated or mastery-oriented may benefit more from such activities, as these orientations support self-directed growth (Schneider & Kwan, 2013).

Growth mindset (Dweck, 2006) reflects the belief that personal abilities can improve through effort. Youth with a growth mindset may perceive challenges during recreation as opportunities for development, enhancing both the experience and their connection to their caregiver (Yeager & Dweck, 2012). These factors are essential for reducing distress and promoting attachment.

Finally, self-expansion theory (Aron et al., 2013) suggests that close relationships serve as a platform for personal growth by allowing individuals to incorporate new experiences and perspectives into their sense of self. Recreational engagement with caregivers may support this process when fostering shared exploration, emotional relatedness, and mutual investment. Youth who approach recreation with mastery-oriented or growth-focused goals—prioritizing learning and self-development over performance—may be especially likely to experience well-being benefits in this context (Dweck & Leggett, 1988; Nicholls, 1984). These orientations reflect a desire to expand personal capacity, which may align with both the relational closeness and personal growth that self-expansion theory describes.

Based on these frameworks, the study examined the following hypotheses:

1. Youth who are intrinsically motivated will report greater well-being benefits from recreational engagement with caregivers.

2. Youth with a growth mindset and task-oriented goals—focused on learning and development rather than performance—will report higher well-being when engaging in recreation with caregivers.

3. Youth who engage in recreation with caregivers perceived as authoritative will also report higher well-being.

Figure 1 shows theoretical framework depicting pathways to enhanced well-being through caregiver-youth recreation:

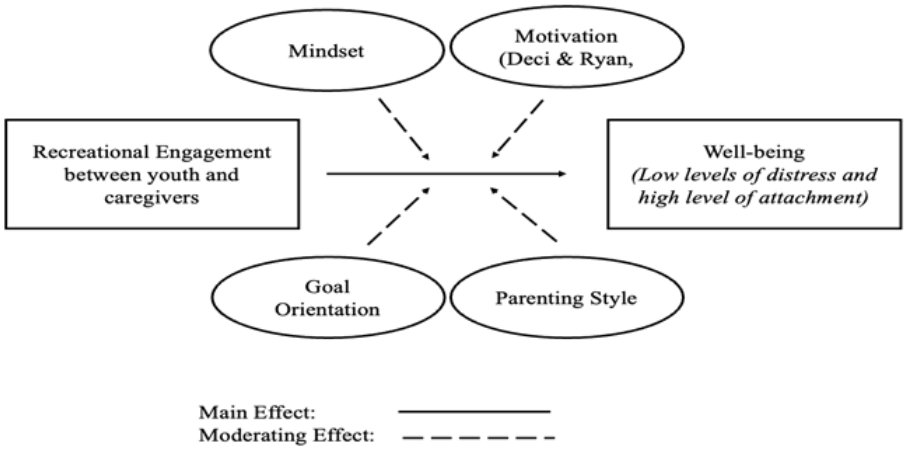

Figure 1. Theoretical framework depicting pathways to enhanced well-being through caregiver-youth recreation.

Method

Participants

A total of 404 adolescents completed the questionnaire: 216 males (53.5%), 182 females (45.0%), and 6 (1.5%) who identified as "other." Due to the small number of participants identifying as "other," these cases were excluded from analyses, resulting in a final sample of 398 (216 males, 54.3%; 182 females, 45.7%). Participants ranged in age from 14 to 18 years, with the largest proportion aged 18 (n = 161, 40.5%), followed by 16 (n = 115, 28.9%), 17 (n = 93, 23.4%), 15 (n = 23, 5.8%), and 14 (n = 6, 1.5%). The mean age was 16.95 years (SD = 1.04).

Most participants cited as residing in the United States (n = 225), followed by the United Kingdom (n = 72), Canada (n = 67), Australia (n = 20), and New Zealand (n = 14). These countries were selected for their cultural and linguistic similarities, offering comparable recreational opportunities and family dynamics while enabling broader generalization across Western youth populations.

Procedure

Ethical approval for this study was granted by the Human Research Ethics Committee at Charles Darwin University (Approval No: H19093). Following approval, the survey was distributed via Pollfish, a third-party participant recruitment platform, and was available for 23 days from 17 September to 12 October 2020.

Pollfish was selected for several methodological advantages aligned with this study's objectives. First, its random device engagement (RDE) sampling—a probability-based method that delivers surveys through mobile applications—provided access to adolescents in their natural digital environments without requiring institutional gatekeeping that might bias toward more accessible or compliant families. Second, the platform's demographic quota functionality enabled precise targeting of the 14-18 age range

across five culturally similar Western nations (the United States, United Kingdom, Canada, Australia, and New Zealand), supporting cross-national generalizability while maintaining sample homogeneity. Third, anonymous online recruitment can help reduce social desirability, a critical consideration when measuring sensitive topics such as mental health symptoms and perceptions of parenting quality (Duffy et al., 2005; Tourangeau, 2013).

RDE operates through partnerships with mobile application publishers, recruiting users who meet predefined demographic criteria. Potential participants are randomly prompted within apps and invited through a double opt-in mechanism to enhance response authenticity. Each participant receives a unique device identifier preventing duplicate responses, and incentivization occurs through in-app reward credits rather than direct payment, reducing motivation-related response bias.

Methodological Considerations

The data collection approach utilized for this study necessarily prioritized breadth and anonymity over depth of contextual detail. Variables such as socioeconomic status, ethnicity, family structure, and urban vs. rural residence were not assessed based on the need to minimize survey burden for adolescent participants. While these factors may influence recreational access and family dynamics, the study's focus on within-person psychological and relational processes (motivation, mindset, perceived parenting styles) meant that examining variance in these internal experiences was prioritized over demographic satisfaction.

Ethical Considerations for Adolescent Consent

This study obtained direct consent from adolescent participants aged 14-18 years without requiring additional parental authorization. This approach was approved by the institutional ethics board and aligns with established ethical frameworks for adolescent research (Santelli et al., 2003; APA, 2018). The waiver of parental consent was justified on the following grounds:

1. **Minimal risk research:** The study involved no more than minimal risk—participants completed validated questionnaires about their own thoughts, feelings, and recreational activities, with no deception, physical intervention, or collection of identifiable information. Research ethics guidelines recognize that parental consent requirements may be waived for minimal-risk survey research where youth can provide informed consent independently (U.S. Department of Health and Human Services, 45 CFR 46.408; National Health and Medical Research Council, 2007).

2. **Protection of participant autonomy and confidentiality:** Requiring parental consent could have compromised the validity and ethical integrity of the research in several ways. Adolescents experiencing family conflict, controlling caregivers, or strained caregiver relationships—populations of particular interest to this study—might have been systematically excluded if parents declined consent or if youth feared caregiver awareness of their participation. Given that the study assessed perceptions of parenting quality, requiring caregiver involvement might have also introduced potential for coercion or response bias (Diviak et al., 2004; Tigges, 2003).

3. **Developmental appropriateness of direct consent:** Adolescents aged 14-18 years possess the cognitive capacity to understand research procedures, weigh risks and benefits, and provide meaningful informed consent (Weithorn & Campbell, 1982). In many jurisdictions, minors in this age range can independently consent to health services; analogously, they can ethically consent to participate in low-risk survey research about their own psychological experiences (Santelli et al., 2003).

4. **Methodological considerations in anonymous online recruitment:** The anonymous nature of mobile-based recruitment meant researchers had no means of verifying family circumstances, parental identity, or even the accuracy of reported ages beyond platform protections. Attempting to collect parental consent through unverifiable online mechanisms (e.g., checkbox attestation) would have created an illusion of ethical protection without meaningful oversight, while potentially introducing selection bias toward families with greater parental monitoring or digital access (Liu et al., 2017).

Informed Consent Procedures

Prior to survey access, participants reviewed a detailed information sheet explaining the study's purpose, procedures, potential risks (minimal psychological discomfort when reflecting on family relationships), benefits (contributing to youth well-being research), and their right to withdraw without consequence. Consent was indicated by selecting "I consent" before proceeding; those who selected "I do not consent" were immediately exited from the survey. No personal identifiable information was collected at any stage. This approach balanced respect for adolescent autonomy, protection of vulnerable populations, and methodological rigor while maintaining ethical integrity in accordance with institutional and international guidelines for research involving minors.

Measures

This study employed a set of established, validated instruments selected to align with the research objectives. Each measure was chosen for their relevance in assessing adolescents' well-being, attachment, parenting perceptions, motivation, goal orientation, mindset and recreational engagement. Where necessary, items were adapted for clarity and contextual fit (e.g. substituting "caregiver" for "mother/father"). Reliability indices (Cronbach's α) from the current sample are reported for each scale.

Depression, Anxiety, & Stress Scale – 21 items (DASS-21)

The DASS-21, developed by Lovibond and Lovibond (1995), is a 21-item survey that consists of three self-reported measures designed to assess an individual's perception of their level of depression, anxiety, and stress. Each emotional state is measured by seven items, which are ranked on a 4-point Likert scale, where the participant must indicate the extent to which each item applied to them over the past week. Examples of items on the DASS-21 include: *I could not seem to experience any positive feeling at all* (Depression); *I was worried about situations in which I might panic and make a fool of myself* (Anxiety); *I tended to overreact to situations (Stress).*

For this study, the DASS-21 was utilized to assess the participant's reported level of well-being. Lower reported distress was associated with higher well-being, while high levels of reported distress were associated with lower well-being. The Cronbach's alpha for each of the three variables revealed the following scores: depression (0.88), anxiety (0.82), and stress (0.83).

The Inventory of Parent & Peer Attachment (IPPA)

The IPPA is a 28-item self-report measure, developed by Armsden and Greenberg (1987), that assesses the degree to which adolescents feel attached to their parents and peers across the three dimensions of the attachment relationship: trust, communication, and alienation. Individuals must rank each item on a 5-point scale ranging from *Almost Never or Never* to *Almost Always or Always*.

The IPPA includes a separate measure to gauge the reported level of attachment of youth to their mother and father respectively. For the present study, the measure was modified to include a single caregiver attachment scale. Accordingly, the terms *mother* and *father* were replaced with *caregiver*. Sample items for measuring caregiver attachment included: *My caregiver respects my feelings* (trust); *I like to get my caregivers view on things I'm concerned about* (communication); and *I get easily upset around my caregiver* (alienation). The Cronbach's alpha for the caregiver attachment items was 0.93. The peer attachment subscale was excluded from this study.

Parenting Styles & Dimensions Questionnaire

The G1 shortened version of the Parenting Styles and Dimensions Questionnaire, developed by Robinson et al. (2001), was used to assess the parenting style of caregivers. The G1 version, in contrast to alternative versions, assesses the youth's perception of their caregivers parenting style. The shortened version of the G1 consists of 32 items that measure the three main parenting styles identified by Baumrind (1971): authoritative, authoritarian, and permissive.

This questionnaire is typically presented to participants in two versions: one to evaluate the parenting style of their mother and one for their father. For this study, a single version was used with the term *caregiver* replacing mother and father. Participants were instructed to answer the items in relation to whomever they considered their primary caregiver to be. Items on the PSDQ include: *My caregiver was responsive to my feelings and needs* (authoritative); *My caregiver spanked me when I was disobedient* (authoritarian); and *My caregiver stated punishments to be but did not actually do them* (permissive). The reliability analysis of the parenting dimensions via Cronbach's alpha resulted in the following scores: authoritarian (0.88), authoritative (0.92), and permissive (0.62).

The Behavioral Regulation in Exercise Questionnaire (BREQ-2)

The BREQ-2 was developed by Markland and Tobin (2004) to assess the underlying reasons individuals engage in exercise. The measure consists of 19 items that are divided into five motivation factors: amotivation (e.g., "I don't see why I should exercise"); external regulation/extrinsic motivation (e.g., "I exercise because other people say I should"); introjected regulation (e.g., "I feel ashamed when I miss an exercise session"); identified regulation/intrinsic motivation (e.g., "It is important to me to exercise regularly"); and intrinsic regulation (e.g., "I enjoy my exercise session"). This multidimensional structure allowed the present study to examine how qualitatively different forms of motivation uniquely moderated the relationship between caregiver-youth recreational engagement and adolescent well-being, rather than treating motivation as a unitary construct.

The items on the BREQ-2 are traditionally rated on a 7-point scale. However, for this questionnaire, the item responses were ranked on a 4-point scale ranging from 1, *not true*, to 4, *very true*. This 4-point scale made it easier for participants who were potentially completing this questionnaire on their mobile devices.

The Cronbach alpha scores for each of the variables were: amotivation (0.84), external regulation (0.76), introjected regulation (0.79), identified regulation (0.69), and intrinsic regulation (0.84).

The Task and Ego Orientation in Sports Questionnaire (TEOSQ)

The TEOSQ (Duda, 1989) is a 13-item scale that was designed to understand how individuals define success in sports. Individuals may define success in sports as being task-oriented, wherein they desire skill mastery (e.g., *I learn a new skill, and it makes me want to practice more*). Alternatively, individuals may be ego-oriented, wherein they define success in sports as being the best (i.e., *The others cannot do as well as me*).

The items are ranked on a 5-point scale that ranges from 1, *Strongly disagree*, to 5, *Strongly agree*. The participants were asked to complete this scale twice: once in relation to how they agreed with each item and once in relation to how they felt their significant caregiver related to each item. The Cronbach alpha revealed the following scores: ego self (0.82), task self (0.85), ego caregiver (0.82), and task caregiver (0.85).

Implicit Theories of Intelligence Scale

The Implicit Theories of Intelligence Scale (Dweck, 2000) was utilized to understand the influence of mindset on youths' recreational engagement with caregivers and their well-being. The version of the scale included in the study questionnaire was the three-item measure that included: *The kind of person someone is, is something basic about them, and cannot be changed very much; People can behave differently, but the important parts of who they are cannot really be changed; and Everyone is a certain kind of person, and they cannot really do anything to change that.* The three items on the measure were ranked on a 5-point scale, with responses ranging from 1, *Strongly disagree*, to 5, *Strongly agree*.

Although Dweck's original Implicit Theories Scale comprises six items (three assessing entity beliefs and three assessing incremental beliefs), Dweck (2000) recommends the use of the entity-only subscale. These items are less cognitively demanding and are therefore considered less susceptible to social desirability bias. In the current study, participants completed the measure twice: once with reference to themselves and once with reference to how they perceived their significant caregiver's beliefs. The use of only the entity items also served to minimize potential repetition effects. Cronbach's alpha coefficients for the entity subscales were 0.68 for youth and 0.72 for caregivers.

Recreational Engagement

To assess the recreational engagement of youth, and to the extent they engaged in recreation with their caregiver, a list of common recreational activities was presented. These recreational items included active recreational activities, such as hiking/running, soccer/rugby/AFL, gymnastics, swimming, and dance, *et cetera*. The participants could select, on a 4-point scale, from 1, *never*, to 4, *a great deal*, how often they engaged in each type of recreational activity. If a participant selected an option of more than *never*, they were then asked to indicate on the same 4-point scale how often they participated in that activity with their significant caregiver.

Demographics

For this study, only three items were provided to assess the participant's demographics. The participants were first asked to provide their gender (male, female, or other), their age (14, 15, 16, 17, or 18), and their country of residence (Australia, New Zealand, the United Kingdom, the United States, or Canada). No data were collected on ethnicity, socioeconomic status, or geographic region (urban vs. rural), limiting the ability to assess contextual variation.

Data Analysis

Data were analyzed using IBM SPSS Statistics (Version 25). A series of multiple linear regression models examined whether youth characteristics moderated the relationship between recreational engagement and well-being outcomes. Well-being was operationalized through four outcomes: DASS-21 subscales (depression, anxiety, stress) and IPPA attachment scores.

Each regression model included recreational engagement as the predictor, one moderator variable (mindset, goal orientation, motivation subscales, or parenting style dimensions), their interaction term, and gender as a covariate. This approach tested one moderator per model to allow clear interpretation and minimize construct overlap. A total of 56 moderation analyses were conducted across all moderator-outcome combinations.

To test for moderation effects, interaction terms were created by standardizing both predictor and moderator variables ($M = 0$, $SD = 1$) and computing their product. Significant interaction terms ($p < .05$) indicated that the strength or direction of association between recreational engagement and well-being varied depending on the moderator level. Simple slopes analyses were conducted for significant interactions to interpret the nature of moderation effects.

Prior to analysis, standard regression assumptions were assessed: normality of residuals was confirmed through histogram and Q-Q plot inspection; linearity was verified through scatterplot examination; homoscedasticity was assessed via residual plots; multicollinearity was evaluated using variance inflation factors (all VIF < 2.0); and influential outliers were identified using standardized residuals and Cook's distance values. All assumptions were satisfactorily met.

Results

A total of 56 moderation analyses were conducted across conceptually distinct predictor-outcome combinations. Of these, seven interaction effects were nominally significant at $p < .05$. Because a large number of interaction tests were performed, a Benjamini-Hochberg false discovery rate (FDR) correction was applied across all 56 interaction-term p-values to control for inflated Type 1 error. Following correction, four interaction effects remained statistically significant ($q < .05$). For each of the significant interactions, simple slopes were examined at ±1 SD of the moderator to aid interpretation. For clarity, only the authoritative parenting interaction is illustrated in Figure 2.

Mindset effects

As shown in Table 1, mindset did not influence the relationship between youths' recreational engagement with caregivers and their well-being.

Table 1. Mindset as a moderator between recreational engagement and well-being.

Dependent Variable	Interaction Term	B	SE	β	*p*	95% CI
Depression	RecCare × Mindset (Youth)	0.020	0.056	.022	.723	[-0.090, 0.130]
	RecCare × Mindset (Caregiver)	0.007	0.059	.007	.906	[-0.110, 0.120]
Anxiety	RecCare × Mindset (Youth)	-0.048	0.054	-.054	.376	[-0.155, 0.059]
	RecCare × Mindset (Caregiver)	-0.008	0.058	-.009	.884	[-0.122, 0.105]
Stress	RecCare × Mindset (Youth)	-0.029	0.055	-.032	.605	[-0.138, 0.080]
	RecCare × Mindset (Caregiver)	-0.011	0.059	-.012	.850	[-0.137, 0.105]
Attachment	RecCare × Mindset (Youth)	0.061	0.056	.069	.269	[-0.049, 0.171]
	RecCare × Mindset (Caregiver)	-0.081	0.059	-.088	.168	[-0.196, 0.030]

Note: Only the interaction component of the results are presented in the table.

Goal orientation effects

The goal orientation of youth did influence the relationship between youth's recreational engagement with caregivers and their wellbeing. As table 2 below reveals, the task orientation of youth influences their feelings of depression when they engage in recreation with their caregivers (p = .011). Specifically, when the task orientation of youth is high—that is youth prioritize skill development—then recreational engagement with caregivers was positively related to depression. However, this effect did not remain statistically significant after FDR correction and is therefore not interpreted further.

Table 2. Goal orientation as a moderator between recreational engagement and well-being.

Dependent Variable	Interaction Term	B	SE	β	*p*	95% CI
Depression	RecCare × Ego Orientation (Youth)	0.048	0.068	.053	.476	[-0.090, 0.180]
	RecCare × Task Orientation (Youth)	0.181	0.071	.210	.011	[0.042, 0.320]
	RecCare × Ego Orientation (Caregiver)	-0.030	0.067	-.035	.653	[-0.155, 0.105]
	RecCare × Task Orientation (Caregiver)	-0.057	0.070	-.067	.414	[-0.196, 0.080]
Anxiety	RecCare × Ego Orientation (Youth)	0.122	0.066	.136	.065	[-0.008, 0.252]
	RecCare × Task Orientation (Youth)	0.059	0.069	.069	.394	[-0.076, 0.194]
	RecCare × Ego Orientation (Caregiver)	-0.099	0.065	-.116	.129	[-0.226, 0.028]
	RecCare × Task Orientation (Caregiver)	0.067	0.068	.079	.330	[-0.066, 0.200]
Stress	RecCare × Ego Orientation (Youth)	0.108	0.066	.119	.105	[-0.022, 0.238]
	RecCare × Task Orientation (Youth)	0.124	0.069	.144	.075	[-0.012, 0.260]
	RecCare × Ego Orientation (Caregiver)	-0.062	0.065	-.072	.341	[-0.190, 0.066]
	RecCare × Task Orientation (Caregiver)	0.001	0.069	.001	.985	[-0.134, 0.136]
Attachment	RecCare × Ego Orientation (Youth)	-0.001	0.061	-.001	.985	[-0.121, 0.119]
	RecCare × Task Orientation (Youth)	0.040	0.064	.046	.535	[-0.086, 0.166]
	RecCare × Ego Orientation (Caregiver)	0.103	0.060	.120	.088	[-0.015, 0.221]
	RecCare × Task Orientation (Caregiver)	-0.116	0.063	-.138	.066	[-0.241, 0.008]

Note: Only the interaction component of the results are presented in the table.

Motivation effects

As Table 3 reveals, several motivation-related interactions were nominally significant at $p < .05$. After FDR correction, only external regulation remained a significant moderator of the association between recreational engagement and depression, anxiety, and stress ($q < .05$). Specifically, higher external regulation strengthened the positive association between recreational engagement with caregivers and psychological distress outcomes. Although the interaction involving identified regulation and attachment was nominally significant ($p = .008$), this interaction did not remain significant after FDR correction and should be interpreted cautiously.

Table 3. Motivation as a moderator between recreational engagement and well-being.

Dependent Variable	Interaction Term	B	SE	β	*p*	95% CI
Depression	RecCare × Amotivation	-0.012	0.056	-.012	.836	[-0.122, 0.098]
	RecCare × External Regulation	0.172	0.055	.182	.002	[0.063, 0.281]
	RecCare × Introjected Regulation	-0.067	0.054	-.070	.215	[-0.173, 0.039]
	RecCare × Identified Regulation	-0.013	0.080	-.013	.874	[-0.170, 0.144]
	RecCare × Intrinsic Regulation	0.159	0.071	.162	.026	[0.019, 0.298]
Anxiety	RecCare × Amotivation	0.008	0.055	.009	.882	[-0.100, 0.116]
	RecCare × External Regulation	0.185	0.055	.198	.001	[0.077, 0.292]
	RecCare × Introjected Regulation	-0.075	0.053	-.080	.157	[-0.179, 0.029]
	RecCare × Identified Regulation	0.015	0.079	.016	.851	[-0.140, 0.170]
	RecCare × Intrinsic Regulation	0.107	0.070	.110	.128	[-0.030, 0.244]
Stress	RecCare × Amotivation	-0.018	0.056	-.019	.750	[-0.128, 0.092]
	RecCare × External Regulation	0.193	0.056	.206	.001	[0.083, 0.303]
	RecCare × Introjected Regulation	-0.058	0.054	-.061	.281	[-0.164, 0.048]
	RecCare × Identified Regulation	0.060	0.080	.064	.456	[-0.097, 0.217]
	RecCare × Intrinsic Regulation	0.125	0.071	.128	.080	[-0.014, 0.264]
Attachment	RecCare × Amotivation	0.049	0.059	.053	.403	[-0.067, 0.165]
	RecCare × External Regulation	-0.083	0.059	-.088	.161	[-0.199, 0.033]
	RecCare × Introjected Regulation	-0.068	0.057	-.072	.229	[-0.180, 0.044]
	RecCare × Identified Regulation	0.227	0.085	.242	.008	[0.060, 0.393]
	RecCare × Intrinsic Regulation	-0.081	0.075	-.084	.279	[-0.228, 0.066]

Note: Only the interaction component of the results are presented in the table.

Table 4. Results from the FDR analysis

Outcome	Interaction Term	B	SE	95% CI	p	q (FDR)
Depression	RecCare × External Regulation	0.172	0.055	[0.063, 0.281]	.002	.030*
Anxiety	RecCare × External Regulation	0.185	0.055	[0.077, 0.292]	<.001	.023*
Stress	RecCare × External Regulation	0.193	0.056	[0.083, 0.303]	<.001	.023*

Parenting style effects

Authoritative parenting significantly moderated the relationship between recreational engagement and attachment (β = −.103, p = .002). This interaction indicates that the association between recreational engagement and attachment differed across levels of authoritative parenting. Simple slopes analyses (see Figure 2) showed that at lower levels of authoritative parenting, greater recreational engagement with caregivers was associated with lower secure attachment, whereas at higher levels of authoritative parenting, recreational engagement was positively associated with secure attachment. This interaction remained statistically significant following Benjamini–Hochberg correction. Thus, authoritative parenting may buffer against potential relational costs of caregiver involvement in recreation.

Table 5. Parenting style as a moderator between recreational engagement and well-being.

Dependent Variable	Interaction Term	B	SE	β	*p*	95% CI
Depression	RecCare × Authoritative Parenting	0.039	0.047	.048	.405	[-0.053, 0.131]
	RecCare × Authoritarian Parenting	0.008	0.056	.010	.881	[-0.102, 0.118]
	RecCare × Permissive Parenting	0.029	0.056	.037	.602	[-0.081, 0.139]
Anxiety	RecCare × Authoritative Parenting	0.024	0.046	.029	.603	[-0.066, 0.114]
	RecCare × Authoritarian Parenting	0.002	0.054	.002	.971	[-0.104, 0.108]
	RecCare × Permissive Parenting	0.015	0.054	.019	.787	[-0.091, 0.121]
Stress	RecCare × Authoritative Parenting	0.062	0.047	.076	.187	[-0.030, 0.154]
	RecCare × Authoritarian Parenting	-0.005	0.056	-.006	.935	[-0.115, 0.105]
	RecCare × Permissive Parenting	0.023	0.056	.029	.684	[-0.087, 0.133]
Attachment	RecCare × Authoritative Parenting	-0.083	0.027	-.103	.002	[-0.136, -0.030]
	RecCare × Authoritarian Parenting	0.011	0.032	.014	.724	[-0.052, 0.074]
	RecCare × Permissive Parenting	0.013	0.032	.016	.692	[-0.050, 0.076]

Note: Only the interaction component of the results are presented in the table.

Table 6. Results from the FDR analysis

Outcome	Interaction Term	B	SE	95% CI	p	q (FDR)
Attachment	RecCare × Authoritative Parenting	−0.083	0.027	[−0.136, −0.030]	.002	.030*

Figure 2 depicts the significant interaction effect of authoritative parenting on the association between recreational engagement with caregivers and attachment.

	Recreation with Caregivers z = -1	Recreation with Caregivers z = 1
Authoritative z = -1	0.114769	0.346
Authoritative z = 1	-0.114769	-0.432

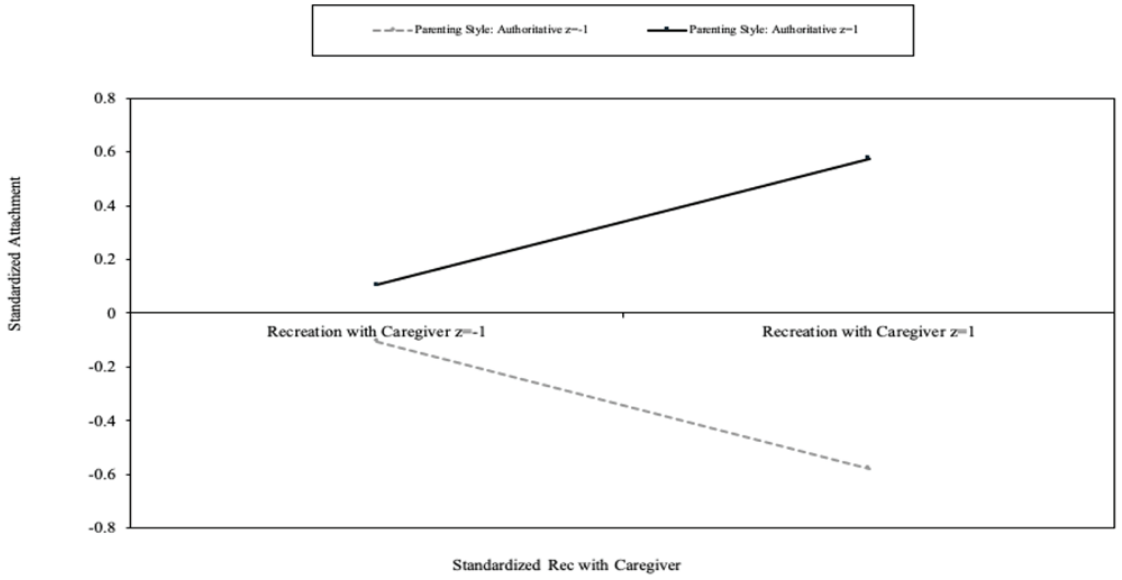

Figure 2. Authoritative parenting style moderating recreational engagement with a caregiver and attachment.

Discussion

This study examined how personal and relational factors moderate the relationship between caregiver-youth recreational engagement and adolescent well-being. Drawing on attachment theory, self-determination theory, and self-expansion theory, the findings reveal that shared recreation's impact depends on motivational alignment and relational quality—challenging assumptions about universal benefits of family activities. These patterns both confirm and extend prior research on autonomy, motivation, and family dynamics, while revealing important nuances about when shared activities optimize versus undermine adolescent well-being.

Three hypotheses were tested: (1) intrinsically motivated youth would experience greater well-being when engaging in recreation with caregivers; (2) youth with growth mindsets and task-oriented goals would report higher well-being when engaging in recreation with caregivers; and (3) youth perceiving authoritative parenting would show enhanced well-being and attachment when engaging in recreation with caregivers. Results provided mixed support for these predictions, revealing important nuances about when caregiver involvement optimizes versus undermines outcomes. Importantly, following Benjamini-Hochberg correction for multiple testing, only four interactions remained statistically significant; therefore, interpretation focused primarily on authoritative parenting and external regulation, whereas other nominal effects should be considered exploratory.

When Shared Recreation Enhances Well-being

Consistent with the third hypothesis, authoritative parenting—characterized by warmth and autonomy support—was associated with stronger attachment during shared recreation. This interaction remained significant after FDR correction. Youth who perceived their caregivers as highly authoritative reported greater attachment security, whereas those who perceived their caregivers as embodying low levels of the authoritative parenting style showed reduced attachment during joint activities. This aligns with attachment theory's emphasis on sensitive responsiveness: when caregivers participate supportively without being intrusive or controlling, recreational contexts become opportunities for relational deepening (Bowlby, 1988).

This finding aligns with previous research demonstrating that authoritative parenting promotes positive outcomes across various contexts (Chan & Koo, 2011) and that parental autonomy support during activities enhances well-being (Fousiani et al., 2013; Grolnick & Ryan, 1989). Together, these results suggest that shared recreational contexts may strengthen relational bonds when caregiver involvement is experienced as supportive rather than intrusive. Although identified regulation showed a nominal interaction with attachment prior to correction, this effect did not remain statistically significant following FDR adjustment and should therefore be interpreted cautiously.

The Complexity of Motivation and Goal Orientation

Contrary to the first hypothesis, intrinsic regulation showed a nominal interaction with distress outcomes, such that youth reported higher psychological distress during caregiver involvement in recreation. However, this effect did not remain statistically significant after FDR correction and should therefore be considered exploratory. Although counterintuitive, this pattern may reflect situations in which caregiver participation is experienced as autonomy-limiting by adolescents who value self-directed engagement. This interpretation aligns with research on helicopter parenting, which indicates that excessive parental involvement—even when well-intentioned—can undermine adolescent autonomy and increase anxiety (Schiffrin et al., 2014). Related work suggests that adolescents require opportunities for autonomous recreation to support self-regulation and identity development (Smetana, 2011; Steinberg & Silk, 2002), and that parental over-involvement during activities can paradoxically reduce intrinsic motivation (Guay et al., 2017).

From a self-determination theory perspective, intrinsically motivated youth may experience recreation as a domain for self-endorsed exploration; caregiver involvement perceived as evaluative or directive may therefore undermine autonomy satisfaction. Self-expansion theory similarly suggests that such youth may conceptualize recreation as a space for individual growth, where caregiver direction constrains opportunities for self-discovery (Aron et al., 2013).

However, alternative explanations warrant consideration. First, intrinsic motivation was assessed using the BREQ-2, which measures general exercise motivation rather than motivation for caregiver-involved recreational activities specifically; this measurement-domain mismatch may partially account for the observed pattern. Second, the cross-sectional design precludes causal inference. Third, the study assessed frequency but not quality or style of caregiver involvement, leaving open the possibility that autonomy-supportive versus controlling participation differentially influences outcomes.

Finally, the broader pandemic context may have amplified autonomy-related tensions. Given the number of moderation analyses conducted, this nominal finding should be interpreted cautiously until replicated using domain-specific motivation measures and corrected multiple-testing frameworks.

In contrast, external regulation emerged as the most consistent moderator after correction for multiple testing, strengthening the association between recreational engagement with caregivers and higher depression, anxiety, and stress. This aligns with self-determination theory, suggesting that externally pressured participation may amplify feelings of control and contribute to distress. Although modest in magnitude, this pattern represents one of the clearest findings in the present study. Task orientation also showed a nominal interaction with depression prior to correction; however, this effect did not remain significant following FDR adjustment and should be interpreted cautiously.

With respect to cognitive factors, mindset showed no significant moderation effects. This pattern may indicate that proximal motivational experiences—specifically whether youth feel autonomous versus controlled during activities—exert stronger influence on immediate well-being than more distal cognitive beliefs about ability malleability. This finding suggests that how youth experience participation matters more than how they conceptualize ability in predicting responses to caregiver involvement. Alternatively, mindset may operate through long-term developmental processes not captured in this cross-sectional design, such as shaping how youth interpret feedback over time rather than directly moderating engagement effects.

Implications for Practice

These findings offer actionable guidance for optimizing family recreation. Rather than assuming shared activities universally benefit youth, caregivers and practitioners should attend to the motivational and relational context in which recreation occurs. In particular, externally pressured participation was associated with poorer well-being outcomes, suggesting that caregiver involvement may be most beneficial when it is autonomy-supportive rather than controlling. Caregivers should allow adolescents to select activities, emphasise enjoyment over performance, and engage in ways that foster warmth and responsiveness. In some cases, indirect support (e.g., facilitating access or expressing interest) may be more helpful than direct participation, particularly when adolescents experience involvement as pressured.

Theoretical Contributions

This study's integration of three theoretical frameworks advances understanding beyond simplistic assumptions that family togetherness benefits youth. Attachment theory helps explains why authoritative parenting may enhance outcomes; self-determination theory clarifies why motivation moderates the effects (such as why threats to autonomy can outweigh relational benefits); and self-expansion theory illuminates why intrinsically motivated youth may experience involvement as constraining. Together, these frameworks suggest recreational engagement enhances well-being when the activity simultaneously satisfies relatedness, autonomy, and competence needs—when one need is threatened, net effects may be negative despite relational benefits. These conclusions are primarily supported by the corrected effects involving authoritative parenting and external regulation. Overall, these findings highlight that the developmental implications of caregiver–youth recreation depend less on participation itself than on the motivational and relational context in which it occurs.

Conclusions and Recommendations

This study examined how personal and relational factors shape well-being outcomes when adolescents engage in recreational activities with caregivers. Following correction for multiple testing, two primary moderation patterns were supported. First, external regulation consistently strengthened the association between recreational engagement and higher psychological distress (depression, anxiety, and stress), suggesting that participation experienced as pressured or obligatory may undermine well-being during caregiver involvement. Second, authoritative parenting was associated with stronger attachment outcomes, indicating that caregiver recreation may be most beneficial within warm and autonomy-supportive relational contexts. Other nominal interaction effects did not remain significant after correction and should be considered exploratory.

Although the observed interaction effects were modest, these findings highlight that caregiver-youth recreation is a context-dependent resource. When involvement occurs in supportive, autonomy-respecting relationships, shared activities may foster connection and attachment. In contrast, when participation is externally pressured, recreational engagement may coincide with poorer well-being outcomes. Practically, caregivers may benefit from emphasising autonomy support, responsiveness, and enjoyment rather than obligation or control.

The study's integration of three theoretical frameworks, the multi-country sample across comparable Western contexts, and its data collection during COVID-19 provided unique insight into family dynamics under conditions of heightened proximity. Anonymous online recruitment reduced social desirability bias and enabled inclusion of adolescents who might otherwise be excluded from studies requiring parental consent (Diviak et al., 2004; Santelli et al., 2003).

However, several limitations should be acknowledged. The cross-sectional design precludes causal inference; longitudinal research is needed to establish directionality and intervention effects. Reliance on self-report introduces potential bias, as youth perceptions of caregiver behavior reflect subjective experience. Incorporating multi-informant data (e.g. caregiver reports or observational measures) would strengthen validity. The sample, drawn from five Western, individualistic countries and limited to ages 14-18, restricts generalizability to younger populations and collectivists cultures, highlighting the need for cross-cultural and developmental replication. Recruitment through Pollfish may have introduced selection bias, and the decision not to collect data on contextual variables such as ethnicity, socioeconomic status, or family structure further limits the understanding and generalizability of these findings. The fact that data were collected during COVID-19 may also limit generalizability, as pandemic-related stress and altered routines could have amplified both positive and negative dynamics. Finally, measuring frequency rather than quality or type of recreational engagement may have overlooked important nuances.

Future research should employ longitudinal designs to track developmental changes and test intervention effects. Experimental research randomly assigning families to different involvement styles could test causal hypotheses. Qualitative studies exploring how youth distinguish supportive from intrusive involvement would illuminate underlying mechanisms. Cross-cultural research should examine whether autonomy patterns differ in collectivist contexts. Finally, intervention studies could test whether training caregivers to recognize externally controlled versus autonomy-supportive participation motivational profiles and adjust involvement accordingly improves outcomes- potentially helping them distinguish facilitative from directive support and recognize signs of intrusive involvement.

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Artificial Intelligence and Teacher Wellbeing in Nigeria: A Thematic Analysis through the Lens of the Job Demands–Resources Model

Nijerya'da Yapay Zekâ ve Öğretmen İyi Oluşu: İş Talepleri–Kaynaklar Modeli Perspektifinden Tematik Bir Analiz

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Abstract

Artificial intelligence (AI) is increasingly shaping educational practices in Nigeria, with potential implications for teachers' emotional, cognitive, and professional wellbeing. Drawing on the Job Demands–Resources (JD–R) model, this review synthesises evidence from fourteen Nigeria-focused studies published between 2020 and 2025 to examine how AI is discussed as both a source of support and a source of strain for teachers. Using thematic analysis, the review identifies patterns across empirical and conceptual studies addressing AI-enabled changes in workload, skills development, ethical concerns, and institutional conditions. The synthesis suggests that AI is frequently associated with perceived benefits such as reduced administrative burden, enhanced instructional feedback, and opportunities for professional innovation. At the same time, the literature highlights challenges linked to uneven AI literacy, limited training provision, infrastructural constraints, and uncertainties surrounding data privacy, accountability, and professional autonomy. These factors are commonly interpreted as increasing job demands, particularly in under-resourced educational settings. Across the reviewed studies, teacher wellbeing appears to be shaped less by the presence of AI itself than by the balance between AI-related demands and the availability of supportive resources, including training, leadership support, and ethical governance frameworks. However, the reviewed evidence varies in methodological approach, scope, and reported outcomes, which limits the extent to which firm conclusions can be drawn regarding causal relationships. Overall, this review indicates that AI has the potential to both support and challenge teacher wellbeing in Nigeria, while underscoring the importance of context-sensitive implementation and the need for more robust, longitudinal research.

Keywords: Artificial Intelligence, Teacher Wellbeing, Job Demands–Resources Model, Thematic Analysis Nigeria

Öz

Nijerya'da yapay zekâya (YZ) ilişkin eğitim uygulamaları giderek daha fazla şekillenmekte olup, bu durum öğretmenlerin duygusal, bilişsel ve mesleki iyi oluşları açısından önemli sonuçlar doğurma potansiyeline sahiptir. İş Talepleri–Kaynaklar (JD–R) modeli temel alınarak hazırlanan bu derleme, 2020–2025 yılları arasında yayımlanmış ve Nijerya odaklı on dört çalışmadan elde edilen bulguları sentezleyerek, YZ'nin öğretmenler açısından hem destek hem de stres kaynağı olarak nasıl ele alındığını incelemektedir. Tematik analiz yöntemi kullanılarak, iş yükü, beceri gelişimi, etik kaygılar ve kurumsal koşullardaki YZ destekli değişimleri ele alan ampirik ve kavramsal çalışmalar arasındaki örüntüler belirlenmiştir. Sentez bulguları, YZ'nin sıklıkla idari yükün azalması, öğretimsel geri bildirimin güçlenmesi ve mesleki yenilik fırsatlarının artması gibi algılanan yararlarla ilişkilendirildiğini göstermektedir. Bununla birlikte literatür, eşitsiz YZ okuryazarlığı, sınırlı eğitim olanakları, altyapı yetersizlikleri ve veri gizliliği, hesap verebilirlik ile mesleki özerklik konularındaki belirsizliklere bağlı zorlukları da vurgulamaktadır. Bu faktörler özellikle kaynakların kısıtlı olduğu eğitim ortamlarında iş taleplerini artıran unsurlar olarak yorumlanmaktadır. İncelenen çalışmalar genelinde öğretmen iyi oluşunun, YZ'nin varlığından ziyade YZ'ye ilişkin talepler ile eğitim, liderlik desteği ve etik yönetişim çerçeveleri gibi destekleyici kaynakların dengesi tarafından şekillendiği görülmektedir. Ancak incelenen kanıtların yöntemsel yaklaşım, kapsam ve raporlanan sonuçlar bakımından farklılık göstermesi, nedensel ilişkiler konusunda kesin sonuçlara ulaşılmasını sınırlamaktadır. Genel olarak bu derleme, YZ'nin Nijerya'da öğretmen iyi oluşunu hem destekleyebilecek hem de zorlayabilecek bir potansiyele sahip olduğunu ortaya koymakta; bağlama duyarlı uygulamaların önemini ve daha sağlam, boylamsal araştırmalara duyulan ihtiyacı vurgulamaktadır.

Anahtar Kelimeler: Yapay Zekâ, Öğretmen İyi Oluşu, İş Talepleri–Kaynaklar Modeli, Tematik Analiz, Nijerya

Introduction

Teacher wellbeing has become an increasingly prominent topic in educational research, driven by growing concerns about teacher stress and burnout and their significant impact on both teachers and students. Teacher wellbeing can be defined as a teacher's cognitive, emotional, physical, and social responses to the conditions of their work and profession (Viac & Fraser, 2020). High levels of teacher wellbeing are linked to greater job satisfaction, increased resilience, and better student outcomes (Duckworth et al., 2009; Beltman et al., 2011). Conversely, poor teacher well-being is associated with adverse outcomes, including high levels of stress, burnout, and absenteeism, which, in turn, contribute to teacher attrition and reduced educational quality (Burić et al., 2019). In fact, research indicates that nearly half of teachers report high daily work stress, with many facing chronic emotional exhaustion, feelings of professional inadequacy, and diminished motivation (Agyapong et al., 2022). This reality not only undermines the effectiveness of teaching but also disrupts the broader functioning of schools, leading to a cycle of low morale and high turnover rates (Viac & Fraser, 2020). The rising pressure on teachers to manage their increasing responsibilities amidst a dynamic educational landscape has made it more urgent to address and improve teacher wellbeing.

At the same time, Artificial Intelligence (AI) is increasingly becoming a cornerstone of educational reform, promising to revolutionize teaching practices and classroom management. AI can be broadly defined as the simulation of human intelligence in machines that are programmed to think and perform tasks typically requiring human cognition, such as problem-solving, decision-making, and learning (Avurakoghene & Oredein, 2023). In the educational context, AI encompasses a range of tools designed to support teachers by automating administrative tasks, personalizing learning for students, and providing data-driven insights to enhance instructional practices (Avurakoghene & Oredein, 2023). While AI holds significant promise for alleviating teacher workload and improving learning experiences, it also presents challenges that may affect teacher well-being. For instance, the rapid integration of AI into classrooms could place additional demands on teachers to adapt to new technologies, potentially leading to stress and feelings of inadequacy if proper support and training are not provided. Moreover, the reliance on AI may alter the traditional teacher-student dynamic, raising concerns about the dehumanization of education and the impact on teachers' professional autonomy and job satisfaction (Selwyn, 2019). Therefore, as AI continues to permeate schools, it is crucial to examine how these technological innovations intersect with teacher wellbeing, ensuring that their implementation fosters a supportive and sustainable environment for teachers.

Despite the growing global literature on AI in education, there remains a significant gap in understanding how its integration affects teachers' emotional, cognitive, and professional well-being within the Nigerian context. Much of the existing scholarship originates from developed countries, leaving a limited synthesis of evidence on how AI adoption influences teachers' lived experiences in resource-constrained educational systems such as Nigeria's. To bridge this gap, this paper offers a critical scoping review of how AI integration influences teacher wellbeing in Nigerian schools through both beneficial and detrimental mechanisms, guided by the JD–R model.

Research Aim

This paper aims to explore how AI affects teacher well-being in Nigerian educational contexts, examining both its supportive and adverse impacts through the lens of the JD–R model.

Research Questions

The following questions guide this review:

1. What dimensions of teacher wellbeing are most frequently discussed in Nigeria-focused literature on AI in education?

2. How is AI being conceptualised and applied in Nigerian educational settings, and what teacher roles are implicated?

3. In what ways does AI function as a job demand and/or job resource influencing teacher wellbeing in Nigeria?

4. What organisational, ethical, and capacity-building conditions are identified as shaping whether AI supports or undermines teacher wellbeing in Nigeria?

Understanding Teacher Wellbeing

Teacher wellbeing has become a central concern in educational research, as the increasing demands placed on teachers continue to influence their personal and professional lives. Teacher wellbeing is a multifaceted concept encompassing the cognitive, emotional, physical, and social dimensions of a teacher's experience in the school environment (Viac & Fraser, 2020). It refers not only to the teacher's job satisfaction and mental health but also to their overall quality of life, professional fulfillment, and ability to cope with the challenges of the profession. As the teaching profession faces growing challenges, including workload pressures, student behavior issues, and societal expectations, understanding and enhancing teacher well-being is critical to maintaining a motivated and effective workforce.

Researchers have approached teacher wellbeing from various perspectives, leading to a broad and sometimes fragmented understanding of the term. For instance, teacher wellbeing is influenced by both individual characteristics such as personal coping mechanisms, and organizational factors, such as school climate and leadership (Dreer, 2022). This broader understanding of wellbeing has been corroborated by studies highlighting the interplay between internal and external factors affecting teachers' mental and emotional health (Burić et al., 2019).

The connection between teacher well-being and professional outcomes is well established. High teacher well-being is associated with greater job satisfaction, resilience, and improved performance (Beltman et al., 2011). Conversely, low well-being has been linked to negative consequences, including burnout, stress, absenteeism, and higher turnover rates (Sutton & Wheatley, 2003). A study found that nearly half of teachers report high daily work-related stress, which significantly affects their emotional and physical health and their overall effectiveness in the classroom (Agyapong et al., 2023). Chronic stress and burnout not only affect teachers personally but also have far-reaching consequences for student outcomes, school climate, and institutional performance (Burić et al., 2019).

The literature has also explored how teachers' well-being is influenced by their work environment. According to a study, social support from colleagues and school leaders is a crucial factor in maintaining teacher wellbeing (Turner et al., 2022) Teachers who feel supported by their peers and administrators are more likely to experience higher job satisfaction and lower stress. In contrast, a lack of support, unrealistic

expectations, and poor school climate can exacerbate feelings of burnout and inadequacy. Moreover, teachers' work-life balance plays a significant role in their well-being. Teachers who are unable to balance their professional and personal lives often report higher stress levels and reduced job satisfaction (Duran et al., 2024).

In addition to these workplace factors, personal attributes such as self-efficacy and emotional intelligence are increasingly seen as key contributors to teacher wellbeing. Self-efficacy refers to a teacher's belief in their ability to manage classroom challenges effectively, and studies have shown that teachers with higher self-efficacy are more likely to experience greater job satisfaction and lower stress levels (Ortan et al., 2021). Similarly, emotional intelligence, which involves recognizing, understanding, and managing one's own emotions and those of others, has been linked to greater resilience and well-being among teachers (Kamboj & Garg, 2021). These individual qualities help teachers navigate the daily stresses of the profession and contribute to their overall sense of fulfillment.

Conceptualizing AI in Educational Contexts

AI is rapidly transforming education, ushering in a shift from conceptual ideas and theories to real-world applications in classrooms, universities, and online learning spaces (Beloev et al., 2024). As education systems globally grapple with evolving demands, AI has emerged not merely as a tool but as a catalyst for reimagining how learning happens, who facilitates it, and what skills will be required in the future workforce (Jaakkola et al., 2020). Its impact on teaching and learning extends beyond the automation of tasks, it is reshaping the very essence of education, urging us to reconsider traditional roles and processes.

A growing body of literature has sought to develop frameworks to ensure that AI is integrated meaningfully into educational practices. One such approach, created by an interdisciplinary team, emphasizes the need for teachers to be well-versed in AI systems. Their research suggests that without proper engagement and training, teachers risk being marginalized as passive consumers of technology rather than active participants in this digital revolution (Beloev et al., 2024). Thus, the role of the teacher is no longer confined to a traditional instruction model but is evolving into that of a facilitator, guiding students through dynamic, individualized learning experiences powered by intelligent systems.

AI's promise in education can be explored along two central dimensions: the content we teach and the way we teach it (Holmes et al., 2019). As AI reshapes industries and creates new markets, the content delivered in educational settings must also evolve to ensure that students are prepared for careers that did not exist even a decade ago (Holmes et al., 2019). Moreover, AI is transforming how we learn. From personalized learning paths to real-time feedback, AI tools support teachers by adapting instruction based on students' unique strengths and weaknesses (Jaakkola et al., 2020). This evolution makes education more flexible, enabling students to learn at their own pace, anytime, anywhere, and allowing teachers to focus more on mentoring and less on administrative tasks (Bobro, 2024).

The most compelling benefit of AI in education is its potential for personalization. Traditional education models often adopt a one-size-fits-all approach, but AI allows for tailor-made learning experiences. By utilizing algorithms to monitor and adjust teaching strategies based on real-time data, AI ensures that every student receives the specific support they need to succeed (Jaakkola et al., 2020). Furthermore, AI can automate routine administrative tasks, such as grading and attendance tracking, giving teachers more time to engage with students in more profound, more meaningful ways (Avurakoghene & Oredein, 2023).

Theoretical Framework: The JD–R Model

The JD–R Model, first proposed by Demerouti and Bakker in 2001, offers a robust and flexible theoretical framework for understanding the dynamic interplay between work-related stressors and well-being (Demerouti et al., 2001). It conceptualizes the work environment through two overarching categories: job demands and job resources. Job demands refer to aspects of work that require sustained physical, emotional, or cognitive effort, such as workload, time pressure, role conflict, or adapting to new technologies, and are generally associated with psychological and physiological strain. Job resources encompass the physical, social, or organizational elements that help individuals meet work goals, buffer the effects of job demands, and stimulate learning and development. These include autonomy, supportive leadership, peer collaboration, professional learning opportunities, and access to practical technological tools.

Crucially, the JD-R model posits two psychological mechanisms that shape work outcomes: the health impairment process and the motivational process. The health impairment process suggests that excessive or chronic job demands can lead to strain and eventual burnout, thereby diminishing teacher well-being. Conversely, the motivational process highlights how adequate job resources promote work engagement, job satisfaction, and professional resilience. The model has since evolved to include personal resources, traits such as self-efficacy, emotional intelligence, and adaptability, that empower individuals to manage demands more effectively and enhance the benefits derived from job resources (Granziera et al., 2021).

In this research, the JD-R model provides a nuanced lens for evaluating how the integration of AI into education intersects with teacher well-being. AI functions as a dual construct, serving as both a potential job resource and a new source of job demand. On the one hand, AI can automate administrative tasks such as grading, generate personalized insights into student progress, and support differentiated instruction. When supported by training and a conducive school climate, these technologies serve as valuable tools for job-related tasks, reducing workload and enabling more focused, creative, and effective teaching. On the other hand, the introduction of AI often raises expectations for teachers to rapidly learn unfamiliar systems, redesign lesson delivery, and address ethical or data-related concerns. These new responsibilities can create emotional and cognitive stress, especially in environments where training and support are inadequate. Findings reveal that perceived AI-related risks such as fears of job displacement, reduced pedagogical autonomy, or insufficient technical expertise, heighten anxiety and strain among teachers (Hu et al., 2025). This illustrates the health impairment process, particularly when supportive job resources are not readily available.

However, the same study also highlights the buffering role of both job and personal resources. Access to professional development, responsive leadership, a collaborative culture, and peer mentoring has been shown to mitigate AI-related stress and foster positive engagement. Additionally, personal attributes like openness to innovation and technological self-efficacy enhanced teachers' ability to adapt and view AI as a collaborative aid rather than a threat. These insights align with broader literature indicating that job and personal resources do not merely offset stress, they also activate engagement and innovation in high-demand settings (Wang et al., 2018). Notably, the JD-R model's adaptability allows it to account for differences in educational contexts.

Method

Thematic analysis was used to synthesize research on AI and teacher well-being in Nigeria. This approach was chosen because it helps clearly identify patterns across different types of studies and allows for explanations that go beyond just describing the findings (Braun & Clarke, 2006).

Search Strategy and Study Selection

The study selection process followed a systematic multi-stage approach to ensure transparency and rigor. Primary searches were conducted in ProQuest, Springer, Sage, and ScienceDirect, while Google Scholar and ResearchGate were used as supplementary discovery routes to ensure comprehensive coverage. Keywords such as "Artificial intelligence," "teacher wellbeing," "teacher stress," "teacher workload," "AI literacy," "ethics," and "Nigeria" were used. Initial searches across academic databases and discovery routes returned an estimated 58,625 records (i.e., total search hits displayed by the platforms). Because these figures represent search outputs rather than downloadable records, a refined subset of records was exported for screening. After exporting and consolidating records from all sources, 58,625 records were retained for screening, from which 200 duplicate records were identified and removed, resulting in 58,136 unique records for title and abstract screening.

Following this screening stage, 120 full-text articles were assessed for eligibility against the inclusion criteria. Of these, 106 were excluded for reasons including publication outside the 2020–2025 timeframe, non-Nigerian context, lack of focus on teacher wellbeing, non-peer-reviewed status, or inaccessible full text. This process resulted in a final sample of 14 studies included in the thematic analysis. The review process is summarized as follows:

- **Identification:** A total of 58,625 records were initially retrieved from electronic databases and discovery routes. All fourteen included items sourced were verified as having undergone formal peer-review by checking the original journal website.
- **Screening:** Following the removal of duplicates, 58,136 records were screened based on titles and abstracts to ensure they aligned with the core focus of AI in education within the Nigerian context.
- **Eligibility Assessment:** 120 full texts were assessed against strict inclusion and exclusion criteria, and 106 records were excluded.
- **Inclusion:** After this multistage screening process, 14 studies met all eligibility criteria and were retained for final thematic analysis. These included a mix of surveys, qualitative research, and conceptual papers.

Inclusion Criteria

Studies were included if they met all of the following criteria:

- Published between 2020 and 2025
- Focused on AI in educational contexts within Nigeria

- Examined implications for teacher wellbeing, workload, professional practice, or psychological experiences
- Published in peer-reviewed academic journals
- Available in English language
- Full text accessible for review
- Empirical, conceptual, or review studies relevant to the research aim

The search, screening, and selection process is summarized in Table 1 and Table 2 while Figure 1 shows the PRISMA flow diagram.

Results

Table 1: Search results from academic databases

	Database	Records found after the search	Exclusion criteria	Final Count Based on Summary Review
Academic Databases	ScienceDirect	6,400	Excluded studies were those published outside the 2020–2025 timeframe, not appearing in peer-reviewed journals, unrelated to education, conducted outside Nigeria, published in languages other than English, or lacking accessible full texts.	0
	ProQuest	20,627		1
	Sage	1,500		2
	Springer	6,001		2

Table 2: Search results from discovery routes

	Discovery Route	Records found after the search	Exclusion criteria	Final Count Based on Summary Review
Discovery Routes (*all included studies were verified as peer-reviewed publications*)	Google Scholar	16,000	Excluded studies were those published outside the 2020–2025 timeframe, not appearing in peer-reviewed journals, unrelated to education, conducted outside Nigeria, published in languages other than English, or lacking accessible full texts.	4
	ResearchGate	8,097		5

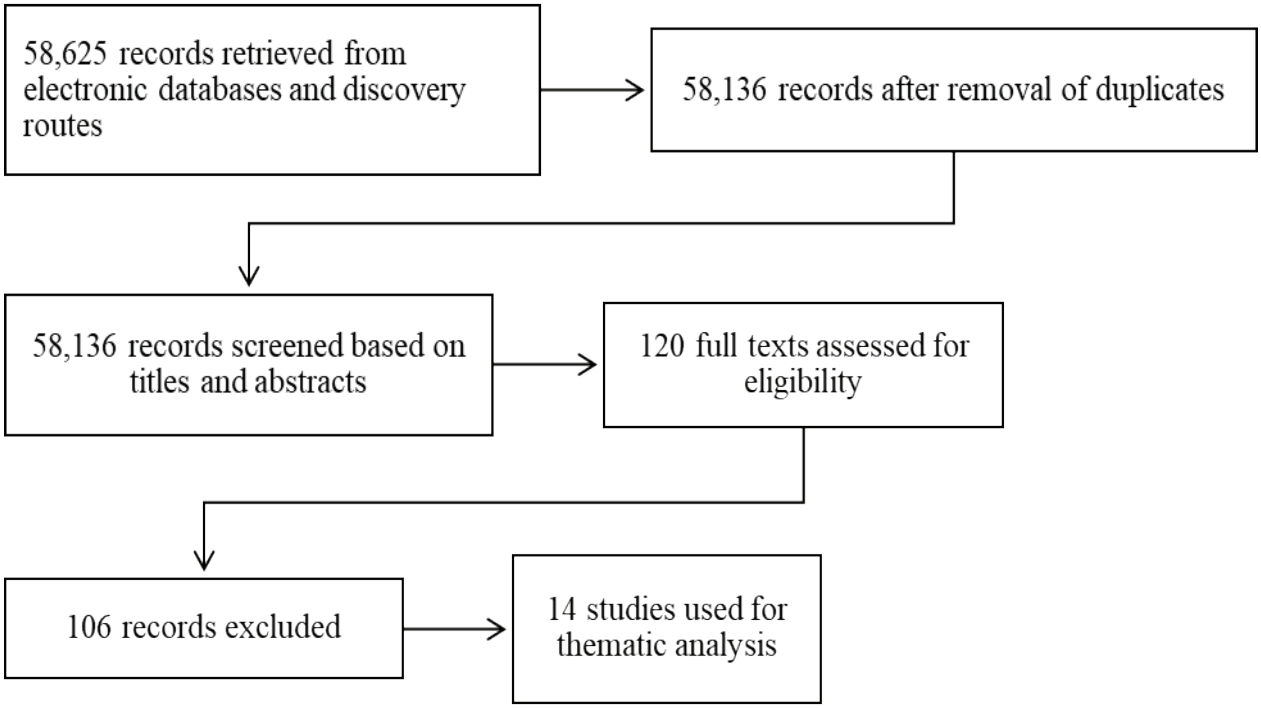

Figure 1: PRISMA flow diagram

Analytical Framework

The JD–R model was used to help interpret how changes related to AI create job demands, like increased mental effort, too many tasks, and uncertainty, as well as job resources such as reduced workload, support for skills development, and greater autonomy. This model guided how the findings were understood in relation to teacher wellbeing. The JD–R model was used to inform the analysis, but it did not limit the types of codes or evidence considered.

Theme Development Process

Themes were developed using a straightforward, step-by-step process:

1. **Familiarisation:** Each study was read completely, focusing on outcomes for teachers like workload, stress, confidence, integrity, and motivation.

2. **Initial Coding:** Parts of the text were labeled with simple descriptions that matched the claims or evidence, such as *"workload reduction," "skills gap," "ethical anxiety," "infrastructure barrier," and "assessment automation*."

3. **Code Refinement and Consolidation:** Similar codes were combined, and unclear codes were made more precise to keep meanings consistent across all studies.

4. **Theme Construction**: Codes were grouped into possible themes based on common ideas and causes, for example, how gaps in skills can lead to technostress. In the next step, these themes were reviewed using the JD–R model to determine whether they functioned primarily as demands, resources, or context factors, without altering the original evidence to fit predefined categories.

5. **Synthesis Write-up:** The findings were written up to explain how AI-related factors connect to teacher well-being in Nigerian education.

Major Themes that Emerged

The thematic analysis of the fourteen reviewed studies revealed four overarching themes that collectively explain how AI influences teacher wellbeing in Nigerian educational contexts. These themes align with the research questions and are interpreted through the lens of the JD–R model, which distinguishes between stress-inducing job demands and supportive job resources that enhance well-being.

Theme 1: Teacher Wellbeing as a Multidimensional Outcome Shaped by AI-Mediated Work Design

Throughout the reviewed literature, there is consistent evidence that teacher wellbeing is not a single psychological state but rather a multifaceted phenomenon with emotional, cognitive, and professional components. Scholars provided concrete support for this interpretation by demonstrating how teachers' emotional strain, role expectations, and feeling of professional value are altered by evolving technology and working settings (Caleb & Fumen, 2025; Akinbode, 2025). The ability of teachers to comprehend, manage, and confidently use AI tools in the classroom is intimately linked to cognitive wellness, according to empirical research on AI literacy and instructional practice (Ewa, 2024; Fwangle et al., 2025; Nwoke et al., 2025).

The most obvious evidence of professional wellbeing can be found in research that looks at AI as a tool to enhance teaching creativity and effectiveness. Instructors report higher levels of competence, motivation, and occupational meaning when AI improves professional development, curriculum design, or assessment quality (Oluyemisi et al., 2025). On the other hand, narrative and policy-focused studies emphasize that when AI adds more monitoring, evaluation demands, or performance expectations without matching resources, emotional strain increases (Ayo, 2025; Ahmed, 2025).

When analysed using the JD–R framework, these findings show that AI concurrently reconfigures job demands and job resources, changing wellbeing. AI serves as a job resource that improves professional contentment when it boosts autonomy, skill use, and instructional control (Ewa, 2024; Lawanson & Ozurumba, 2025). On the other hand, research demonstrate how emotional stress and cognitive overload increase when AI increases workload, role ambiguity, or monitoring (Akinbode, 2025; Caleb & Fumen, 2025). Therefore, this theme goes beyond JD–R by demonstrating how professional, emotional, and cognitive health co-evolve within AI-mediated job design as opposed to functioning as distinct outcomes. This theme is supported by Caleb & Fumen (2025), Akinbode (2025), Ewa (2024), Fwangle et al. (2025), Nwoke et al. (2025), Oluyemisi et al. (2025), Ayo (2025), Ahmed (2025), and Lawanson & Ozurumba (2025).

Theme 2: Uneven AI Integration and Capability Gaps as Escalating Job Demands

The uneven integration of AI creates various experiences of opportunity and stress in Nigerian educational contexts, which is the second theme among the 14 research. While institutional reviews by Oparaduru and Uchendu (2024) and Oluyemisi (2023) highlight unequal infrastructure, policy implementation, and institutional readiness, empirical surveys like Fwangle et al. (2025) and Ewa (2024) show significant differences in AI literacy across gender, school type, and location.

Increased employment demand is sometimes attributed to capability gaps, including inadequate training, poor technical support, and lack confidence in the application of AI. Studies all specifically describe this pattern, demonstrating that teachers are expected to incorporate AI into their lessons without sufficient planning (Fwangle et al., 2025; Nwoke et al., 2025; Okunade, 2024). Additionally, narrative analyses show that the adoption of AI frequently coexists with current teaching duties, resulting in role overload and ongoing cognitive strain (Ahmed, 2025; Caleb& Fumen, 2025).

Together, these studies demonstrate how, when capability development falls behind technology advancement, AI becomes an additional demand rather than a potential resource within the JD–R paradigm. Research shows that even technologies that reduce effort (such AI-driven evaluation) can make teachers feel more stressed if they don't have the institutional support or the necessary skills (Ayo, 2025; Dagunduro et al., 2025). According to the analysed Nigerian evidence, this topic refutes deterministic assertions that AI automatically makes teaching easier and instead demonstrates how, in situations with limited resources, AI can exacerbate inequity, anxiety, and professional fragility. This theme is supported by Oparaduru & Uchendu (2024), Oluyemisi (2023), Fwangle et al. (2025), Ewa (2024), Nwoke et al. (2025), Okunade (2024), Ahmed (2025), Caleb & Fumen (2025), Ayo (2025), and Dagunduro et al. (2025).

Theme 3: Ethical Governance, Trust, and Professional Integrity as Psychosocial Moderators

The reviewed literature identifies ethical uncertainty as a crucial psychosocial component influencing teacher welfare in AI-enabled workplaces, in addition to workload and skill levels. Empirical evidence show that teacher integrity and professional confidence are significantly predicted by transparency and accountability in AI use (Apie, 2025). Another complementary research emphasises ongoing worries about algorithmic opacity, data privacy, and accountability for AI-mediated decisions, especially in evaluation and performance tracking (Oparaduru & Uchendu's, 2024; Oluyemisi's, 2023).

Ethical ambiguity erodes trust and increases anxiety, particularly when teachers believe that mistakes will be misattributed or that their reputation will be harmed, according to studies on teacher attitudes and professional identity (Ekanem et al., 2025; Ahmed, 2025). According to JD-R, these moral ambiguities serve as psychological demands on teachers' jobs, which diminishes their sense of control and work stability. On the other hand, a study offers concrete proof that unambiguous ethical frameworks serve as workplace resources by promoting emotional safety, professional validity, and trust (Apie, 2025).

This theme goes beyond the JD–R paradigm by showing that ethical governance is a resource for wellbeing in AI-mediated work. While JD-R has historically placed a strong focus on social support and task demands, the Nigerian research examined here highlight the importance of moral clarity, accountability, and trust in maintaining wellbeing in digitally monitored learning contexts. This theme is supported by Apie (2025), Oparaduru & Uchendu (2024), Oluyemisi (2023), Ekanem et al. (2025), and Ahmed (2025).

Theme 4: Institutional Support and Structural Conditions as Determinants of Resource Activation

The last theme summarises data demonstrating that institutional and infrastructure factors influence whether AI acts as a latent stressor or as a helpful resource. Several empirical investigations document enduring issues such inadequate equipment, erratic electricity, and poor internet access (Okunade, 2024; Nwoke et al., 2025; Dagunduro et al., 2025). These circumstances not only add to the strain but also negate the potential advantages of AI solutions, frequently leading to more aggravation than comfort.

On the other hand, research focusing on organised capacity building and organisational assistance, demonstrates that teachers may transform AI into useful job resources through training, mentorship, and coordinated leadership (Lawanson & Ozurumba, 2025; Ewa, 2024). Further evidence demonstrated that institutional coordination and policy clarity regulate teachers' professional and emotional reactions to AI adoption (Ahmed, 2025; Oparaduru & Uchendu, 2024).

These results demonstrate that job resources are context-dependent rather than technology-inherent within the JD–R framework. Regardless of AI's technical potential, Nigerian research indicates that it increases employment demands in the absence of supportive infrastructure and governance. Thus, this theme draws attention to the need for system-aware, institutionally grounded studies of teacher welfare in AI-mediated education and warns against decontextualised implementations of JD-R. This theme is supported by Okunade (2024), Nwoke et al. (2025), Dagunduro et al. (2025), Lawanson & Ozurumba (2025), Ewa (2024), Ahmed (2025), and Oparaduru & Uchendu (2024).

Discussion

The findings of this study provide a nuanced understanding of how AI shapes teachers' well-being in Nigerian educational contexts. Interpreted through the JD–R model, the results reveal that AI integration generates both positive and negative implications for teachers' emotional, cognitive, and professional well-being. This duality supports the model's central proposition that work environments contain elements that can function simultaneously as demands, creating strain and burnout, and as resources, enhancing motivation and job satisfaction (Bakker & Demerouti, 2007).

The reviewed literature demonstrates that AI integration can heighten job demands by imposing new responsibilities and stressors on teachers. Increased workload, role overload, and the pressure to master emerging technologies are recurrent challenges (Caleb & Fumen, 2025). These findings align with prior research suggesting that technological innovations often outpace teachers' preparedness, generating cognitive overload and anxiety (Ertmer & Ottenbreit-Leftwich, 2010). Inadequate digital training, poor infrastructural support, and limited institutional guidance further exacerbate stress, mirroring similar concerns in developing contexts.

Ethical and data privacy issues identified in the reviewed studies (Oparaduru & Uchendu, 2024; Oluyemisi, 2023) add a psychosocial layer to these job demands. Teachers often express uncertainty regarding the surveillance capacities of AI systems and the protection of student data, concerns echoed globally in the AI-in-education discourse (Nemorin et al., 2023). Such factors collectively undermine emotional well-being, suggesting that the absence of ethical clarity and structural support transforms AI from a pedagogical aid into a stress-inducing burden.

Conversely, the findings highlight substantial job resources embedded in AI adoption. Many of the reviewed studies reported that AI enhances instructional efficiency, enables personalized learning, and supports innovation in curriculum delivery (Oluyemisi, 2023; Oparaduru & Uchendu, 2024). These opportunities foster autonomy and competence, two critical components of teacher wellbeing and intrinsic motivation. Consistent with the JD–R model, such resources act as protective factors that buffer the effects of job demands (Bakker & Demerouti, 2017).

The role of institutional and organizational support also emerged as a vital determinant of positive well-being outcomes. Research demonstrated that when teachers perceive high organizational support, the negative effects of digital workload and burnout are significantly reduced (Ewa, 2024). Similarly research emphasized that well-structured professional development initiatives, university–industry collaborations, and digital literacy programmes can enhance teachers' confidence and adaptability (Ahmed, 2025). This reflects previous studies indicating that access to adequate job resources such as training, collaboration, and recognition, stimulates work engagement and professional satisfaction (Skaalvik & Skaalvik, 2018).

Thus, the findings illustrate that teachers' well-being in AI-enhanced learning environments depends on the balance between demands and resources. When teachers are adequately trained, technologically supported, and ethically protected, AI serves as a motivator that improves job satisfaction and self-efficacy. However, in contexts marked by infrastructural deficits, weak institutional backing, and unclear ethical policies, AI integration exacerbates emotional fatigue and disengagement. This dynamic highlight the JD–R model's explanatory power in understanding how contextual factors mediate the relationship between technology use and teacher wellbeing.

The Nigerian context presents additional challenges, such as unequal access to digital resources, underinvestment in professional development, and inconsistent policy implementation, that amplify these imbalances. Nonetheless, the emerging evidence also signals opportunities for transformation. By embedding AI adoption within comprehensive teacher support systems, educational institutions can enhance not only instructional quality but also teacher wellbeing and retention.

Theoretical and Practical Implications

Theoretically, this study extends the application of the JD–R model to technology-mediated educational environments in Nigeria, demonstrating its relevance for analyzing both psychological strain and motivational outcomes among teachers. Practically, the findings suggest that policymakers and school leaders should prioritize teacher-centred AI strategies. These include continuous digital skills training, reliable infrastructure investment, ethical governance frameworks, and psychosocial support mechanisms. By aligning technological innovation with human well-being, educational systems can ensure that AI acts as an enabler of professional growth rather than a source of occupational stress.

Conclusions

This study explored how AI affects teacher well-being in Nigerian schools by analyzing both empirical and conceptual research. Using the JD–R model, the results show that bringing AI into education can offer benefits and also create new challenges for teachers' emotional, cognitive, and professional well-being. The literature often points out that AI can make teaching more efficient, encourage new teaching methods, and help with professional growth. However, the evidence also shows that using AI can increase teachers' workload, require new digital skills, raise ethical questions, and depend on institutional support that is not always available. The studies reviewed show that teacher well-being outcomes vary widely depending on factors such as available resources, infrastructure, AI knowledge, and policies. This means teachers' experiences with AI vary across contexts, and the balance between job demands and resources depends on the context. When teachers have enough training, clear ethical guidelines, and support from their organizations, AI is more likely to help them feel motivated and engaged. On the other hand, in places with fewer resources or weak regulations, AI is associated with greater stress, uncertainty, and pressure for teachers.

Recommendations

1. Ministries of Education and policymakers should develop comprehensive AI integration policies that explicitly include teacher well-being provisions. Ethical standards, data privacy, and workload management guidelines should be embedded in all AI-driven educational initiatives.

2. Regular digital-skills training, mentorship, and collaborative learning platforms should be provided to help teachers adapt to emerging technologies confidently. Professional development programs should focus on both technical competence and emotional resilience.

3. Schools and educational authorities must ensure equitable access to digital tools, stable internet connectivity, and technical support systems. These job resources are essential for reducing technostress and promoting sustained teacher engagement.

4. Developers and educational technology firms should involve teachers in the design and implementation of AI tools to ensure usability, contextual relevance, and alignment with pedagogical goals.

Declarations

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Appendix

Table 1: Summary of Studies Included in the Thematic Analysis of AI and Teacher Wellbeing in Nigeria

Author(s) / Year	Study type / design	Setting/sample	AI focus	Teacher wellbeing dimension(s)	Key relevant findings
Ewa (2024)	Descriptive survey	1,000 primary school teachers (Nigeria)	AI literacy (knowledge, use, ethics)	Professional; cognitive wellbeing	AI literacy predicts skill enhancement; lack of training limits confidence.
Apie (2025)	Descriptive survey (regression)	1,600 public primary school teachers, Cross River State	Ethics of AI	Professional integrity; moral wellbeing	Ethical AI practices predict teacher integrity; absence of guidelines creates anxiety.
Fwangle et al. (2025)	Survey research	77 Physics teachers, Plateau State	AI literacy disparities	Cognitive; professional wellbeing	Low AI literacy heightens insecurity, especially in public schools.
Oparaduru & Uchendu (2024)	Narrative/ systematic review	ODL institutions, Nigeria	AI in ODL and e-learning	Workload; professional wellbeing	AI enables personalised learning but raises ethical and data-privacy concerns.
Dagunduro et al. (2025)	Descriptive survey	100 primary school teachers, Ogun State	AI in early childhood education	Workload; emotional wellbeing	AI-driven assessment reduces workload; lack of training causes stress.
Lawanson & Ozurumba (2025)	Correlational survey	363 secondary school teachers, Bayelsa State	AI for teacher development	Professional motivation; job satisfaction	AI-based training positively relates to quality assurance and motivation.
Caleb & Fumen (2025)	Conceptual review	Nigeria (national scope)	Digitalisation and AI tools	Workload; role strain	Digitalisation expands roles and workload without adequate support.
Ekanem et al. (2025)	Survey (correlational)	400 lecturers & students, Colleges of Education	AI for instructional delivery	Professional confidence	Positive AI attitudes improve instructional confidence.
Ahmed (2025)	Narrative review	Secondary schools, Nigeria	AI and teacher productivity	Job satisfaction; emotional wellbeing	AI improves productivity but welfare and digital divide limit benefits.
Okunade (2024)	Retrospective analysis	Secondary schools, Nigeria	AI in science teaching	Cognitive load; professional efficacy	AI enhances adaptive learning; infrastructure gaps increase stress.
Oluyemisi (2023)	Conceptual review	Tertiary institutions, Nigeria	AI in curriculum development	Professional autonomy; cognitive wellbeing	AI supports curriculum innovation but raises re-skilling pressures.
Nwoke et al. (2025)	Descriptive survey	Teacher training institution, Imo State	AI in mathematics education	Cognitive confidence; workload	AI improves teaching effectiveness; lack of competence frustrates teachers.

Ayo (2025)	Position paper	Nigerian classrooms	AI-driven assessment tools	Workload; emotional wellbeing	AI reduces marking burden but ethical and equity risks remain.
Akinbode (2025)	Correlational survey	364 teachers, Lagos State	Digital working conditions	Psychological wellbeing	Poor work conditions exacerbate stress, framing AI as added demand.