

***DHIKR* AND COGNITIVE NEUROSCIENCE: AN INTEGRATIVE QUR'ANIC INTERPRETATION OF Q.S. AL-RAD' [13]: 28**

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Abstract: The increasing prevalence of anxiety and psychological distress in the post-pandemic era has intensified interest in spiritual and religious sources of mental tranquility. Although previous studies have discussed the psychological and spiritual benefits of *dhikr*, the relationship between the Qur'anic concept of tranquility and its cognitive-neuroscientific mechanisms remains insufficiently explored through an integrated interdisciplinary framework. This study examines the relationship between *dhikr* and *tuma'ninah* in Q.S. Al-Ra'd [13]: 28 by integrating Qur'anic linguistic-semantic analysis, spiritual exegesis, and cognitive neuroscience. Using qualitative library research, the study analyzes the linguistic structure of the verse, examines interpretations of selected classical and modern *mufassir*, and reviews relevant findings from neuroscience and cognitive psychology. The findings show that *tuma'ninah* is presented as a dynamic and continuous process, linguistically reflected in the verbal structure of *tatma'innu*. Exegetically, *dhikr* involves not merely verbal repetition but the internalization of divine awareness within human consciousness. From a cognitive-neuroscientific perspective, repetitive religious and contemplative practices may support emotional regulation, reduce stress reactivity, and promote physiological relaxation. The novelty of this study lies in proposing an integrative framework connecting the linguistic meaning of *tuma'ninah*, Qur'anic interpretations of *dhikr*, and contemporary cognitive-neuroscientific perspectives, contributing to an interdisciplinary understanding of Qur'anic spirituality in addressing contemporary psychological challenges.

Keywords: Cognitive Neuroscience, *Dhikr*, Neurotheology, Q.S. Ar-Ra'd [13]: 28, Tranquility of The Heart.

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Abstrak: Meningkatnya prevalensi kecemasan dan tekanan psikologis pada era pascapandemi telah meningkatkan perhatian terhadap sumber-sumber spiritual dan keagamaan dalam mencapai ketenangan mental. Meskipun penelitian sebelumnya telah membahas manfaat psikologis dan spiritual dari zikir, hubungan antara konsep ketenangan dalam Al-Qur'an dan mekanisme kognitif-neurosainstifiknya masih belum banyak dikaji melalui kerangka interdisipliner yang terintegrasi. Penelitian ini mengkaji hubungan antara zikir dan *tuma'ninah* dalam Q.S. Al-Ra'd [13]: 28 dengan mengintegrasikan analisis linguistik-semantik Al-Qur'an, tafsir spiritual, dan neurosains kognitif. Penelitian ini menggunakan metode kualitatif berbasis studi kepustakaan dengan menganalisis struktur linguistik ayat, mengkaji penafsiran sejumlah mufasir klasik dan modern, serta menelaah temuan-temuan relevan dalam bidang neurosains dan psikologi kognitif. Hasil penelitian menunjukkan bahwa *tuma'ninah* digambarkan sebagai proses yang dinamis dan berkelanjutan, yang secara linguistik tercermin dalam struktur verba *taṭma'innu*. Secara eksegetis, zikir tidak hanya berupa pengulangan verbal, tetapi juga proses internalisasi kesadaran terhadap Allah dalam diri manusia. Dari perspektif neurosains kognitif, praktik keagamaan dan kontemplatif yang dilakukan secara berulang berpotensi mendukung regulasi emosi, mengurangi reaktivitas terhadap stres, dan menciptakan relaksasi fisiologis. Kebaruan penelitian ini terletak pada penyusunan kerangka integratif yang menghubungkan makna linguistik *tuma'ninah*, penafsiran Al-Qur'an tentang zikir, dan perspektif neurosains kognitif kontemporer dalam memahami peran spiritualitas Al-Qur'an dalam menghadapi tantangan psikologis kontemporer.

Kata-kata Kunci: Ketenangan Hati, Neurosains Kognitif, Neuroteologi, Q.S. Al-Ra'd [13]: 28, Zikir.

Introduction

Anxiety and emotional instability have become some of the most prominent characteristics of modern society. The rapid development of information technology, ongoing social changes, economic pressures, academic competition, changing work patterns, and global uncertainty following the COVID-19 pandemic have created a life environment that is increasingly complex and stressful (Essadek et al. 2025, 1). These conditions require individuals to continuously adapt to rapid and ongoing changes. Failure to cope with these demands may lead to various psychological problems, including anxiety, chronic stress, emotional exhaustion, and a decline in overall mental health (Qin et al. 2024, 4).

This phenomenon is further intensified by the increasing use of digital technology and social media, which encourage individuals to constantly compare themselves with others, cope with information overload, and live in an environment marked by uncertainty (Azazz 2025, 1480). As a result, many individuals struggle to manage negative thoughts, maintain emotional stability, and develop psychological resilience when facing life's challenges. Among people of productive age and within academic communities, these conditions can also reduce learning concentration, work productivity, decision-making quality, and the ability to build healthy social relationships (Li et al. 2025, 9).

The 2024 report by the World Health Organization indicates that the prevalence of anxiety disorders has increased significantly since the COVID-19 pandemic, particularly among working-age adults and within academic communities. This increase indicates that anxiety is no longer merely a temporary emotional response but has become one of the major global public health challenges requiring serious attention from various academic disciplines (Bird et al. 2024, 8). Its impact extends

beyond individuals' psychological well-being, affecting physical health, quality of life, economic productivity, interpersonal relationships, and the effectiveness of social and educational institutions.

In this context, anxiety is no longer understood as merely an individual problem but as a multidimensional issue shaped by the interaction of biological, psychological, social, and spiritual factors (Graça and Brandão 2024, 351). Therefore, addressing anxiety cannot rely solely on conventional medical or psychological approaches but requires a more comprehensive and integrative strategy. Numerous studies have shown that spirituality plays an important role in strengthening psychological resilience, enhancing coping mechanisms, and helping individuals find meaning in stressful life experiences. Accordingly, spirituality can serve as a protective factor that supports psychological well-being and emotional stability (Koenig et al. 2012, 5).

Various medical and psychological approaches have been developed to treat anxiety disorders through medication and psychological therapy. However, these approaches generally focus on biological and psychological aspects, without fully considering spirituality as an integral component of the human experience (Okan et al. 2025, 2). Recent studies have described spirituality as a system of meaning that shapes how individuals interpret suffering, uncertainty, and hope, thereby influencing emotional regulation and psychological resilience (Güldaş and Karlı 2023, 350).

From an Islamic perspective, one of the key concepts related to inner peace is *dhikr* (remembrance of Allah). The Qur'an clearly states that the hearts of believers find tranquility through the remembrance of Allah, as mentioned in Q.S. Al-Ra'd [13]: 28 (Vanilla et al. 2024, 3265). This verse demonstrates a strong relationship between faith, *dhikr*, and inner peace, creating opportunities for interdisciplinary research that integrates Qur'anic interpretation, Arabic linguistics, cognitive psychology, and contemporary neuroscience.

Studies published over the past five years have consistently shown a positive relationship between religious practices and mental health. Research in health psychology has reported that mindfulness, religious meditation, and *dhikr* can help reduce anxiety, improve emotional regulation, and enhance psychological well-being (Amrullah 2024, 8). Neuropsychological studies have shown that spiritual practices are associated with reduced amygdala activity and increased prefrontal cortex function, which plays a key role in emotional regulation (Calderone et al. 2024, 14).

On the other hand, Qur'anic exegetical studies on Q.S. Al-Ra'd [13]: 28 have been extensively discussed by both classical and modern scholars. *Tafsīr al-Kashshāf*, *al-Taḥrīr wa al-Tanwīr*, and *Irshād al-ʿAql al-Salīm* explain that tranquility (*iṭmīnān*) is an inner state that arises from faith and closeness to Allah (Rathore et al. 2022, 193). Al-Rāghib al-Aṣfahānī's semantic analysis demonstrates that

the terms *qalb* (heart), *iṭmi'nān* (tranquility), and *dhikr* (remembrance of Allah) are conceptually interconnected in the development of spiritual consciousness. Likewise, classical Sufi works, particularly those of al-Ghazālī, al-Qushayrī, and al-Shādhilī, portray *dhikr* as a means of purifying the heart and cultivating spiritual stability (Ariza et al. 2026, 5).

Although research on *dhikr*, mental health, and neuroscience has grown rapidly, several gaps remain in the academic literature. Most studies in psychology and neuroscience have primarily viewed *dhikr* as a relaxation technique or a form of religious meditation without relating it to the conceptual framework of the Qur'an (Saifuddin 2026, 93). Second, studies in Qur'anic exegesis have generally focused on linguistic, theological, and legal interpretations without relating the meaning of the verses to the cognitive and neurobiological mechanisms described by contemporary science. Third, some studies have adopted a hermeneutical approach that treats the Qur'an as a historical text, which is not fully consistent with the research paradigm that regards the Qur'an as divine revelation with transcendent authority (Vanilla et al. 2024, 3265). Unlike previous studies, this article positions the Qur'an as the primary foundation of interpretation and integrates linguistic and exegetical analysis with findings from cognitive psychology and neuroscience through a critical approach. Thus, this study does not reduce *dhikr* merely to a biological phenomenon, nor does it disregard the role of modern science in explaining the mechanisms underlying inner tranquility.

This study aims to: (1) analyze the linguistic and semantic meanings of Q.S. Al-Ra'd [13]: 28; (2) explain the cognitive and neuropsychological dynamics associated with the practice of *dhikr*; and (3) formulate an integrative model explaining the relationship between the Qur'anic concept of *qalb* and the functioning of the human nervous system. The contribution of this study lies in developing an interdisciplinary approach that integrates Qur'anic exegesis, Arabic linguistics, cognitive psychology, and neuroscience within an epistemological framework that places revelation as the core of interpretation. This model is expected to enrich the development of thematic Qur'anic studies and provide a conceptual foundation for the advancement of spiritual approaches in mental health research.

This article is organized into several sections. The first section presents the introduction, which discusses the research background, previous studies, research gaps, objectives, and contributions. The second section explains the research methodology employed. The third section presents the research findings and discussion, focusing on the linguistic analysis of Q.S. Al-Ra'd [13]: 28, the cognitive dynamics of *dhikr*, and its relevance to contemporary neuroscience. The final section provides the conclusion, research implications, study limitations, and recommendations for future research.

This study employs a descriptive-analytical qualitative approach using an integrative framework that combines Qur'anic exegesis with cognitive neuroscience.

The Qur'an is positioned as the primary normative source, while neuroscience and cognitive psychology serve as complementary empirical perspectives for explaining the psychological and physiological dimensions of *dhikr* and *ṭuma'nīnah*.

The study uses library research and consists of three analytical stages. First, Qur'anic semantic-exegetical analysis applies the thematic interpretation method (*al-tafsīr al-mawḍū'ī*) to Qur'anic verses concerning *dhikr* and tranquility, with Q.S. Al-Ra'd [13]: 28 as the anchor verse (Amin et al. 2025, 1330–39). Key terms, particularly *dhikr* and *ṭuma'nīnah*, are analyzed linguistically and contextually, followed by qualitative content analysis of selected classical and modern tafsir works.

Second, qualitative content analysis is applied to relevant neuroscience and cognitive psychology literature concerning attention, emotional regulation, stress response, and physiological relaxation associated with religious or contemplative practices. Third, conceptual synthesis integrates the two analytical domains through functional comparison rather than equating Qur'anic concepts with specific neural mechanisms. The Qur'anic findings are first formulated as conceptual categories and then compared with relevant scientific findings to identify possible cognitive and physiological dimensions. Thus, neuroscience is not used to prove the Qur'anic text, but to provide an empirical explanatory perspective that complements the Qur'anic and exegetical analysis.

Primary data in this research is the text of Q.S. Al-Ra'd [13]: 28 and its interpretations in four prominent tafsir works representing various perspectives in linguistics, rhetoric (*balāghah*), theology, and Islamic philosophy, namely: *Al-Kashshāf* by al-Zamakhsarī, *Al-Taḥrīr wa al-Tanwīr* by Ibn 'Ashūr, *Irshād al-'Aql al-Salīm* by Abū al-Su'ūd, *Mafātīḥ al-Ghayb* by Fakhr al-Dīn al-Rāzī. Secondary, recent scientific literature on neurotheology and cognitive psychology, including the works of Andrew Newberg, Richard Davidson's studies on brain plasticity associated with meditation practices, as well as leading journal articles (2024–2026) discussing autonomic nervous system regulation through religious interventions (Newberg 2018)

Literature data collection was conducted through documentation methods and textual studies using an integrative conceptual framework. The data collection process consisted of several stages: the collection and classification of Qur'anic verses (*takhrīj al-āyāt*) and the exploration of meanings through classical dictionaries, such as *al-Mufradāt* by al-Rāghib al-Aṣḥānī. Empirical neuroscience data were collected digitally through leading academic databases, including Scopus, ScienceDirect, and Google Scholar, using combinations of keywords such as neurobiology of meditation, spiritual practices and amygdala activity, and neuroscience of religious coping (Calderone et al. 2024, 14). The primary instrument in this study is the researcher him/herself (human instrument), supported by the *Maktabah Shamela* text analysis software (version 4.0) to verify

classical tafsir texts, as well as the Zotero reference management application (version 7.0) to organize and synthesize modern neuroscience literature (Rathore et al. 2022, 193).

Data analysis was conducted using the content analysis method, which was carried out iteratively through four main stages: Stage 1: Qur'anic Linguistic Analysis. This stage analyzes the root forms (*ishtiqaq*) and lexical meanings of the key terms in Q.S. Al-Ra'd [13]: 28 (*dhikr*, *taṭma'innu*, and *qalb*). A semantic field theory approach is applied to understand the relationships of meaning among these terms within the structure of the surah. Stage 2: Scientific (Neurobiological) Analysis. This stage describes empirical findings regarding the neurocognitive mechanisms associated with *dhikr* practices. The analysis considers the function of the parasympathetic nervous system, the role of the hippocampus in emotional memory, the reduction of amygdala activation (stress response), and the optimization of the ventromedial prefrontal cortex (vmPFC) in emotional regulation (Shaverdi et al. 2024, 180). This stage is conducted based on the principle of correspondence rather than the subordination of Qur'anic texts to scientific explanations. Stage 3: Spiritual Analysis. This stage integrates the perspectives of classical exegetes and Sufi approaches to construct a framework of human existential awareness in relation to Allah, ensuring that the meaning of *dhikr* is not reduced merely to a physical relaxation technique. Stage 4: Integrative Interpretation (Synchronization). This stage combines the results of linguistic, neurobiological, and spiritual analyses into a comprehensive interpretive framework that explains the neural dynamics of *dhikr* (Kral et al. 2018, 301–13).

The Root Meaning of *Dhikr*: A Linguistic Perspective

The Arabic root word ذ-ك-ر is one of the most central semantic roots in the Qur'an, from linguistic, theological, and spiritual perspectives. The richness of meanings contained in this root word means that it cannot be understood reductionistically as merely ordinary mental remembrance (Anṣārī 1994, 308). Conversely, this root word represents a semantic network that encompasses cognitive, affective, and performative dimensions simultaneously. In general, the root ذ-ك-ر contains two primary domains of meaning: first, an internal dimension involving memory, consciousness, inner awareness, and the heart's connection with the object of remembrance; second, an external dimension involving verbal mention, linguistic articulation, and repeated recitation (Rochmad et al. 2026, 159).

Ibn Manẓūr explains the broad range of meanings of this term by stating: *Al-dhikr* is preserving something through remembrance. *Al-dhikr* also refers to something that flows upon the tongue. It is the expression of something that is uttered by the tongue (Anṣārī 1994, 308). This definition demonstrates that *dhikr* is not merely a passive mental activity but encompasses active and repetitive linguistic practices. In this perspective, *dhikr* functions as a mechanism for the

preservation of meaning (maintenance of meaning) and as a means of actualizing consciousness through language (Ariza et al. 2026, 5).

***Dhikr* versus *Hifẓ*: From Memory Storage to Active Recall**

Al-Rāghib al-Aṣḥānī further refines this distinction by differentiating *dhikr* from the closely related concept of *hifẓ*. He explains: *Dhikr* may refer to a state of the soul that enables a person to retain acquired knowledge. Although it resembles *hifẓ*, the latter denotes the preservation or storage of knowledge, whereas *dhikr* signifies its conscious retrieval or active presence. The term may also refer to the presence of something in the heart or its articulation through speech (Aṣḥānī 1992, 328). This distinction is highly significant because it shows that *dhikr* is not a static memory stored in the mind, but a dynamic process of bringing meaning back into conscious awareness so that it can function in a person's present consciousness.

From the perspective of contemporary cognitive epistemology, the distinction between *hifẓ* and *dhikr* may be understood as analogous to the distinction between memory storage and active recall. *Hifẓ* refers to the encoding and preservation of information in long-term memory, whereas *dhikr* refers to the conscious retrieval and reactivation of that information, enabling it to shape emotions, attitudes, and behavioral orientation. Accordingly, *dhikr* functions as a mechanism of active consciousness through which divine values and meanings are continually brought into present awareness and integrated into everyday life (Vanilla et al. 2024, 3265).

The Integration of the Internal and External Dimensions of *Dhikr*

Based on this understanding, *dhikr* in the Qur'an has a dual model with two complementary dimensions. First, the internal dimension, which refers to the presence of the heart and the preservation of divine meaning within consciousness. In cognitive science, this dimension can be understood as active cognitive retention, namely the ability to consciously retain and actualize meaning. Second, the external dimension refers to verbal recitation functioning as linguistic reinforcement, that is, a linguistic process that deepens its inner impact and sustains the continuity of conscious awareness (Rochmad et al. 2026, 161).

Ibn 'Āshūr further emphasizes the integration of these two dimensions by explaining that *dhikr* is one of the names of the Qur'an. It may also refer to the remembrance of Allah through verbal recitation, for the continual articulation of *dhikr* by the tongue awakens the heart to maintain awareness of and vigilance toward Allah (Anṣārī 1994, 308). This statement suggests that verbal *dhikr* is not the ultimate objective but rather a means of cultivating inner awareness (*murāqabah*). In this context, language serves as a bridge between cognitive memory and spiritual consciousness, enabling the internalization of divine remembrance into lived awareness.

Accordingly, *dhikr* should not be regarded as a merely mechanical ritual practice.

Instead, it functions as a system of ethical consciousness that shapes and directs human conduct. This perspective is reinforced by al-Ghazālī, who quotes al-Ḥasan as saying: “There are two forms of *dhikr*: remembrance of Allah between oneself and Allah, whose beauty and reward are immense; and even greater than that is remembering Allah when one encounters what Allah has prohibited” (Ghazālī 1982, 326). True *dhikr* is not confined to acts of worship; rather, it remains actively present in real-life situations where individuals are faced with moral choices.

***Dhikr*, Faith, and the Cognitive Structure of Consciousness: Faith as a Continuous Process of Consciousness**

Q.S. Al-Ra’d [13]: 28 portrays believers as individuals who have attained a particular level of spiritual consciousness. They are presented as the continuation or fulfillment of those who repent, indicating that genuine faith presupposes an ongoing process of conscious transformation. If divine guidance is understood as a continuous process, faith naturally progresses toward it. Conversely, if guidance is understood as the divine act of bringing faith into existence, then believers are those who have been guided from the very beginning toward that condition.

The phrase “*and their hearts find tranquility*” (*taṭma’innu qulūbuhum*) portrays a state of inner stability and firmness. The concept of *ṭuma’nīnah* extends beyond mere emotional calmness to denote a condition of existential stability characterized by freedom from epistemic doubt. Such tranquility is attained through the remembrance of Allah, namely through His miraculous revelation, whose truth is beyond doubt, as affirmed in other Qur’anic passages that identify the Qur’an itself as the divinely preserved *dhikr* (Qushayrī 1636, 375).

The use of the present-tense verb (*fi’l muḍāri’*) in this verse carries significant semantic implications. It conveys the continuity and ongoing renewal of tranquility in proportion to the continual renewal of one’s engagement with the verses of Allah. Accordingly, the tranquility of the heart is not a static condition attained once and for all; rather, it is a dynamic state that is continuously renewed through the practice of *dhikr*.

The Exclusivity of the True Source of Tranquility

The statement, indeed, that it is only through the remembrance of Allah, underscores the exclusive nature of the true source of tranquility. Any sense of peace derived from worldly sources is inherently temporary and fragile, as it depends on external conditions that are subject to continual change. By contrast, the Qur’an, as an enduring divine miracle, possesses a unique characteristic in that it remains accessible and relevant to every generation (Yulita and Komarudin Sassi 2025, 4) and provides enduring tranquility (Khaer 2021, 151–68).

This emphasis also carries a profound theological implication: those who reject faith are portrayed as though they lack spiritually living hearts, because they do not find tranquility in the remembrance of Allah, even though it is the clearest and

greatest sign. As a result, their souls remain empty and unsettled, having lost their central source of meaning and orientation.

Abū al-Ḥasan al-Shādhilī emphasizes the integration of verbal and inward *dhikr* by stating that the nature of *dhikr* is that you remember with your tongue while remaining watchful with your heart (Shādhilī 2008, 19). This statement underscores that authentic *dhikr* is always reflective and self-aware. It is not merely the repetition of words, but the conscious presence of Allah as the center of cognitive, emotional, and verbal awareness (Shaʿrāwī 1997, 7318).

The Multiple Dimensions of Tranquility Through *Dhikr*

Classical Qurʾanic exegetes explain that the tranquility of the heart described in this verse encompasses multiple complementary dimensions. The heart attains serenity through the remembrance of Allah's mercy and forgiveness after the anxiety produced by reverential fear of Him, as expressed in the verse: *"Then their skins and their hearts soften at the remembrance of Allah."* Likewise, tranquility emerges when the heart reflects upon the signs of His oneness (*tawḥīd*) and engages with the Qurʾan as a manifest divine miracle that establishes inner certainty (Kathīr 1999, 391).

From a linguistic perspective, the phrase those who believe functions as the subject, while tranquility functions as the predicate. The implied noun hearts may also be supplied, producing the meaning: The hearts of those who believe attain tranquility. This interpretation illustrates the flexibility of the Qurʾanic linguistic structure, which expands semantic richness while preserving clarity of meaning (Zamakhsharī 2009, 528).

At this point, it can be concluded that *dhikr* in Q.S. Al-Raʿd [13]: 28 is not merely a devotional activity, but rather a mechanism for the formation of integrated consciousness. *Dhikr* connects faith with tranquility, language with meaning, and human awareness with the Divine Presence. This conceptual foundation will serve as the basis for the subsequent discussion of further Qurʾanic interpretation, rhetorical analysis, and the integration of scientific and spiritual perspectives in the following sections (Rāzī 2000, 525).

The Dialectics of Qurʾanic Interpretation: Certainty, Anxiety, and the Function of *Dhikr*

The believers in this verse are placed in an important syntactic position. They appear in the accusative case as a substitute for the phrase whoever turns to Allah. This grammatical placement indicates that faith is not merely an attribute, but an existential condition that replaces the state of human disconnection from their Lord. The statement that their hearts find tranquility in the remembrance of Allah becomes a direct description of the inner state that emerges from this orientation of faith (ʿĀshūr 1948, 137).

Muqātil interprets that this tranquility of the heart is attained through the

Qur'an. This interpretation demonstrates that *dhikr* does not always refer solely to verbal activity but may also be understood as an existential engagement with revelation. According to him, tranquility emerges from certainty (*yaqīn*), whereas anxiety arises from doubt (*shakk*). Therefore, *dhikr* functions as an epistemic means that moves human beings from a state of uncertainty toward conviction. The statement Without doubt, through the remembrance of Allah, hearts find tranquility emphasizes that such tranquility is not merely a psychological illusion, but rather the result of a firm and meaningful certainty (Sulaymān 2002).

Ibn 'Abbās provides additional context by relating this verse to the matter of oaths. He explains that when a Muslim swears by the name of Allah, the hearts of believers find reassurance in it. This interpretation suggests that the name of Allah possesses a moral and epistemic authority that brings tranquility, because it refers to the highest truth that requires no further validation. In this context, *dhikr* functions as an anchor of meaning that connects human speech with honesty and trustworthiness.

However, a classical question arises in Qur'anic interpretation: how can tranquility and trembling of the heart exist simultaneously, while Q.S. Al-Anfāl [8]: 2 states that the hearts of believer's tremble when the name of Allah is mentioned? Al-Baghawī provides a systematic explanation of this issue. He explains that fear emerges when Allah's threats and punishment are remembered, whereas tranquility arises when His promises, mercy, and forgiveness are brought to awareness. Therefore, tranquility and fear are not mutually exclusive states, but rather two emotional responses arising from two dimensions of the Divine Presence: justice and mercy.

Dhikr functions as a complex mechanism of emotional regulation. The heart of a believer is neither emotionally rigid nor inactive; rather, it moves dynamically between fear (*khawf*) and hope (*rajā'*). The balance between these two states produces spiritual maturity. The tranquility referred to in this verse does not indicate the absence of emotion, but rather an oriented and balanced emotional stability (Koenig et al. 2012, 1186).

***Dhikr* as an Act of Obedience and as the Qur'an**

Qur'anic exegetes further explain that remembering Allah may signify reverence for Allah and the continual remembrance of Him through obedience to His commands and adherence to His prohibitions. In this perspective, *dhikr* is inseparable from human action. It is not merely an inward or verbal practice, but a form of consciousness that directs ethical behavior. Thus, *dhikr* functions as an organizing principle of life rather than a temporary ritual act (Āshūr 1948, 137).

On the other hand, *dhikr* may also refer to the Qur'an itself, as affirmed in the verse: "And indeed, it is a reminder for you and your people" (Q.S. Az-Zukhrūf [43]: 44). This interpretation is closely related to the challenge posed by the polytheists:

“Why has a sign not been sent down to him from his Lord?” The implicit Qur’anic response is that the revelation itself constitutes the greatest divine sign. Within this framework, remembering Allah signifies an active engagement with the Qur’an as a living and transformative revelation (Sulaymān 2002).

This meaning is further supported by the verses of Q.S. Az-Zumar [39]: 22–23. Allah states: *“So woe to those whose hearts are hardened against the remembrance of Allah. Then their skins and hearts soften at the remembrance of Allah.”* This contrast indicates that the human response to *dhikr* reflects the condition and quality of the heart. A living heart becomes gentle and receptive to divine guidance, whereas a spiritually dead heart becomes hardened and closed (Kathīr 1999, 391).

Accordingly, the term *dhikr* constitutes one of the names of the Qur’an and may also signify the remembrance of Allah through verbal articulation. Such verbal expression, as previously explained, serves to awaken the heart and maintain its state of divine awareness. This demonstrates that the Qur’an integrates text, sound, and consciousness within a unified spiritual framework (Izutsu 2002, 105).

Rhetorical Analysis of the Contrast between Faith and Disbelief

The entire verse presents a contrastive portrayal between the condition of believers and that of disbelievers. Believers are described as possessing living, tranquil, and steadfast hearts through the remembrance of Allah. In contrast, disbelievers are portrayed as those whose hearts are filled with confusion and doubt. Allah states: *Rather, their hearts are in confusion regarding this* (Q.S. Al-Mu’minūn [23]: 63). This confusion indicates the absence of a stable center of meaning (Rothman 2021, 156).

The selection of the present tense verb form twice in the phrase related to the tranquility of the heart indicates the continuity and renewal of this condition. The tranquility experienced by believers is not interrupted by fundamental doubt, even though it may be tested by external circumstances. This differs from worldly tranquility, which is fluctuating and easily disrupted.

The expression indeed, remember Allah begins with a strong emphatic particle. Rhetorically, this expression functions as the conclusion of the preceding discussion. It also contains a general statement that encompasses all human hearts, as if the verse conveys that if the tranquility of believers’ hearts has already been established, then there is no reason for anyone to turn away from the remembrance of Allah. This call is not addressed only to believers, but also to those who remain in a state of disbelief.

Ibn ‘Āshūr explains that the structure of this verse contains a subtle persuasive dimension. The verse appears to invite those who disbelieve to adopt the characteristics of believers, namely by reflecting upon the Qur’an so that their hearts may also attain tranquility. Since the remembrance of Allah is presented before them, the path toward tranquility is truly open to anyone willing to listen

(‘Āshūr 1948, 137).

Ibn Kathīr concludes this exegetical discussion by affirming that believers attain contentment and serenity through their relationship with Allah. They find tranquility in remembering Him and in accepting Him as their Lord and Sustainer. Therefore, Allah alone deserves to be regarded as the ultimate source of tranquility. The statement that, through the remembrance of Allah, hearts find tranquility is not merely a descriptive proposition, but a theological declaration concerning the fundamental nature of the human relationship with the Divine (Kathīr 1999, 391).

A Synthesis of Classical Qur’anic Exegesis

The synthesis of the classical exegetical perspectives presented above reveals that the *mufasssirūn* share a fundamental agreement regarding the essence of this verse, although they approach it through different interpretive frameworks. *Dhikr* is conceptualized as the presence of divine meaning within the heart, an active engagement with revelation, and a practical manifestation of obedience. Meanwhile, tranquility is not understood as the elimination of fear, but rather as an inner stability rooted in the certainty of faith.

This synthesis indicates that Q.S. Al-Ra’d [13]: 28 extends beyond the discussion of individual psychological states and presents a broader framework of ideal religious consciousness. *Dhikr* operates as a central axis that integrates faith, action, and inner spiritual experience. This theological and exegetical foundation provides the basis for the subsequent scientific and spiritual analysis.

Scientific Analysis: *Dhikr* from the Perspective of Contemporary Neuroscientific Studies

The development of research in neural cognition over the past two decades has expanded scientific understanding of how spiritual practices influence the structure, function, and dynamics of the human brain. In this context, Q.S. Al-Ra’d [13]: 28 can be interpreted not merely as a metaphorical statement, but as a phenomenological description of the human inner state that corresponds with certain neurobiological processes. This verse is examined through recent scientific findings concerning psychological tranquility, emotional regulation, and the contribution of religious practices to the reorganization of neural networks (Newberg 2025, 106).

The field of neurotheology, an interdisciplinary area of study investigating the relationship between spiritual experiences and neural activity, indicates that spiritual practices do not function through isolated brain regions. Rather, they involve the integrated activity of three primary neural systems: the emotional system associated with the limbic structures, the cognitive regulatory system mediated by the prefrontal cortex, and the self-awareness system involving the parietal cortex. Andrew Newberg argues that profound spiritual experiences rely

on the simultaneous engagement of these neural networks, generating emotional and cognitive states characterized by stability, clarity, and diminished affective disruption (Wlassoff 2017).

The Role of the Prefrontal Cortex in *Dhikr*-Related Focus and Cognitive Stability

The prefrontal cortex (PFC) plays a central role in the practice of *dhikr*, particularly in relation to concentration, self-regulation, and the formation of spiritual meaning. In repetitive and focused devotional practices such as *dhikr*, neuroimaging studies indicate increased neuronal activity in the dorsolateral prefrontal cortex (DLPFC). This region functions in regulating directed attention, suppressing distracting thoughts (*mind-wandering*), and maintaining focus on a single mental object (Rathore et al. 2022, 193).

When a person repeatedly invokes the name of Allah with full conscious awareness, the DLPFC contributes to filtering cognitive distractions, thereby facilitating a state of mental calmness and cognitive organization. Andrew Newberg describes this process as cognitive quieting, referring to the reduction of mental noise typically associated with stress, anxiety, and cognitive overload. Accordingly, *dhikr* should not be understood merely as a vocal repetition, but as a neurocognitive process that actively enhances attentional regulation and cognitive stability.

Beyond the role of the DLPFC, the ventromedial prefrontal cortex (vmPFC) demonstrates increased engagement during profound spiritual experiences. This neural region is involved in processing positive affect, perceived safety, trust, and existential meaning. Activation of the vmPFC facilitates the integration of religious significance with emotional responses, resulting in a holistic experience of inner tranquility. In relation to this verse, vmPFC activity may be interpreted as a potential biological foundation underlying the experiences of *ridā* (contentment) and tranquility cultivated through *dhikr*.

The Reduction of Amygdala Activity and Emotional Regulation

The amygdala, as a key structure within the limbic system, plays an important role in processing fear, perceived threats, and anxiety responses. Numerous studies indicate that consistent engagement in spiritual practices, including *dhikr*, prayer, meditation, and religious chanting, is associated with reduced amygdala reactivity. Research conducted by Richard Davidson, along with various functional magnetic resonance imaging (fMRI) studies, has demonstrated similar patterns, including decreased negative emotional responses and enhanced physiological stability (Sayers et al. 2015, 9–22).

Davidson further links reduced amygdala reactivity with lower levels of stress-related hormones, including cortisol. Accordingly, *dhikr* may be conceptualized as a regulatory mechanism that facilitates the transition of the body from a stress-

responsive state toward a state of physiological balance. Over time, such regulation may contribute to the development of greater emotional resilience.

Moreover, the hippocampus, a brain structure involved in emotional memory and the construction of experiential meaning, has been reported to demonstrate increased cortical thickness among individuals engaged in long-term meditation or spiritual practices. These findings suggest that spiritual practices may strengthen human capacity to manage stress and sustain a coherent sense of meaning in life. From a Qur'anic perspective, this process resonates with the concepts of *sakīnah* and *al-ṭuma'nīnah*, understood as forms of tranquility arising from cognitive and emotional connection with Allah.

The Reduction of Parietal Cortex Activity and the Experience of Spiritual Tranquility

The deepest dimension of spiritual experience, according to Andrew Newberg, is closely associated with the dynamics of the parietal cortex, particularly the region known as the Orientation Association Area (OAA). This area regulates the perception of self-boundaries, spatial orientation, and the construction of ego experience. When an individual engages in *dhikr* or prayer with deep concentration, blood flow to the OAA tends to decrease.

This reduction in activity produces several phenomenological effects: a weakening of self-boundary perception, a decrease in ego-centered awareness, and an increased sense of connection with a broader reality. Newberg refers to this state as absolute unitary being, namely an experience of existential unity frequently reported in profound spiritual practices. Within the context of *dhikr*, the weakening of ego-centered processing contributes directly to a profound sense of peace, as existential anxiety rooted in ego and the desire for personal control becomes reduced (Mohandas 2008, 63).

Activation of the Autonomic Nervous System and the Role of the Vagus Nerve

Vocal *dhikr* produces significant physiological effects through respiratory mechanisms. The rhythmic articulation of *dhikr* extends the exhalation phase, thereby stimulating vagal nerve activity. This activation promotes the parasympathetic rest-and-digest response, which is characterized by decreased heart rate, enhanced muscular relaxation, and increased Heart Rate Variability (HRV) (Bhoot et al. 2025, 2).

Research on religious chanting has demonstrated a significant increase in HRV, which serves as a biological indicator of mental calmness and emotional well-being. Therefore, *dhikr* not only calms the mind but also contributes to the comprehensive regulation of the autonomic nervous system. The body and soul enter a state of harmony that supports psychological stability (Inbaraj et al. 2022, 52).

Spiritual Analysis of *Sakīnah* as an Existential Experience

The spiritual analysis of this verse reveals the deepest layer of the relationship between human beings and their Lord. *Sakīnah* from the Qur'anic perspective is not merely a psycho-neurological phenomenon, but rather an existential state that emerges from the heart's ontological orientation toward Allah.

1. *Sakīnah* as Sustained Inner Stability

The *sakīnah* rooted in divine revelation is fundamentally distinct from worldly tranquility, as revelation possesses an absolute and immutable nature.

2. *Sakīnah* as an Undisputed State of Consciousness

Sakīnah is not merely a superficial emotional state, but a form of tranquility rooted in a conviction that no longer requires continuous rational reassessment. He explains that a serene heart is one that has achieved reconciliation with its theological beliefs, thereby overcoming epistemic conflict (Khaer 2021, 151–68). Within this framework, *dhikr* functions as a process of consciousness restructuring that integrates perception, intellect, and spiritual meaning.

3. The Integration of *Khawf* and *Rajā'*

When the threats and punishment of Allah are brought to awareness, a sense of fear emerges; whereas when His mercy and promises are remembered, tranquility arises. These two states constitute complementary spiritual dimensions, functioning as two wings that guide the believer's spiritual journey (Maulida and Bashori 2024, 127).

4. Faith as the Foundation of Continuous Tranquility

Knowledge, when disconnected from awareness of Allah's majesty and human existential dependence upon Him, may even become a source of anxiety. *Sakīnah* arises from existential submission and spiritual surrender, not merely from the accumulation of intellectual information (Yulinda and Putri 2026, 138–52).

5. *Sakīnah* as the Transformation of the Human Relationship with Uncertainty

From the perspective of the Qur'an, *sakīnah* (inner tranquility) does not imply the elimination of all uncertainty in human life, as human existence is fundamentally characterized by conditions that cannot be fully known or controlled. Uncertainty regarding the future can give rise to fear *khawf*, particularly when one envisions the possibility of unpleasant events (Rahmandita et al. 2026, 490). In the context of Q.S. Al-Ra'd [13]: 28, *dhikr* (remembrance of God) offers a new perspective on such uncertainty. Inner tranquility is not attained through foreknowledge of future events, but rather through faith in Allah as the ultimate source of meaning and the ultimate refuge (Aini and Halim 2026, 262). Thus, *sakīnah* signifies a shift from reliance on the certainty of circumstances to a steadfastness of heart rooted

in the certainty of faith.

This transformation demonstrates that the human relationship with uncertainty need not culminate in constant anxiety. When uncertainty is viewed solely through the lens of potential adverse outcomes, human attention becomes fixated on future threats, thereby intensifying fear and unease. Conversely, *dhikr* directs human consciousness toward Allah and reaffirms the conviction that life rests within His knowledge and will. Within this framework, *sakīnah* (inner peace) is not a state in which one ceases to think about the future, but rather a state in which thoughts regarding the future do not lose their spiritual orientation. Thus, *dhikr* plays a role in reshaping how individuals interpret uncertainty: transforming it from a purely threatening prospect into an aspect of life faced with faith, *tawakkul* (reliance on God), and an awareness of human limitations (Siregar and Rahman 2025, 420).

Thus, *sakīnah* can be understood as a form of inner stability when facing the unknown. The tranquility mentioned in Q.S. Al-Ra'd [13]: 28 does not eliminate the experience of fear, anxiety, or life's various challenges; rather, it provides a spiritual foundation ensuring that such experiences do not completely overwhelm the heart. This is where the relationship between *dhikr*, faith, and *ṭuma'nīnah* becomes crucial: *dhikr* awakens awareness of Allah, and faith instills conviction, while *ṭuma'nīnah* is the inner state born of that orientation. Consequently, the resulting transformation is not a shift from fear to fearlessness, but rather a transition from uncertainty dominating one's consciousness to uncertainty faced with conviction, *tawakkul* (reliance on God), and steadfastness.

6. *Sakīnah*: Between Spiritual and Psychological Dimensions

The concept of *sakīnah* in Q.S. Al-Ra'd [13]: 28 possesses a spiritual dimension that cannot be reduced to a mere psychological state. The tranquility of the heart described in the verse is directly linked to faith and the remembrance of Allah (*dhikrullāh*); thus, its primary source is theological and spiritual. The heart finds peace not merely because a person succeeds in controlling their emotions, but because they maintain a steadfast relationship with Allah and discover a sense of certainty and meaning through their faith (Hati and Zaidan 2026, 126). Consequently, the spiritual dimension of *sakīnah* lies in the heart's orientation toward Allah, whereas emotional calmness is simply one state that may accompany that orientation.

At the same time, spiritual tranquility has implications for human psychological well-being. When *dhikr* is performed with mindfulness, one's attention is directed toward Allah, preventing the mind from being entirely consumed by fear, doubt, or various negative possibilities. In this context, *dhikr* can be understood as a practice that helps focus attention and regulate emotional responses. This aligns with the scientific discourse on attention and emotional regulation discussed earlier. However, this alignment does not imply that *sakīnah* (tranquility) can be equated

simply with the products of neurological activity or specific psychological states (Hafil et al. 2026, 75). Rather, the psychological dimension is best understood as a manifestation or consequence that may arise from such a spiritual experience.

The relationship between these two dimensions can be illustrated through the interplay of meaning, awareness, and emotional response. At the spiritual level, *dhikr* fosters an awareness of Allah and strengthens faith, while at the psychological level, this awareness provides orientation and stability in the face of life's pressures. Thus, when an individual confronts uncertainty or situations that provoke *khawf* (fear/dread), *dhikr* not only directs one's speech toward Allah but also anchors awareness in the source of conviction and meaning (Pihasiwati et al. 2024, 164). This process enables the emergence of a sense of tranquility that does not rely entirely on fluctuating external circumstances. From this perspective, *sakīnah* (serenity) demonstrates the interconnection between the human spiritual dimension and psychological experience, without erasing the distinction between the two.

Therefore, *sakīnah* in Q.S. Al-Ra'd [13]: 28 can be understood as an integrative concept possessing both a spiritual foundation and psychological implications. Its spiritual basis lies in faith and the remembrance of Allah (*dhikrullāh*), while its psychological implications are evident in tranquility, stability of attention, and the ability to cope with emotional pressure in a more focused manner. This relationship demonstrates that the Qur'an does not portray tranquility merely as an emotional state divorced from belief, but rather as a state of the heart shaped by the human relationship with Allah (Purwanti et al. 2024, 300). Thus, a scientific approach can help elucidate some of the psychological processes that may accompany the experience of *dhikr*, whereas the Qur'anic perspective provides the foundational meaning and spiritual orientation that cannot be fully explained through psychological or neurological approaches alone.

7. Limitations of the Meaning of *Sakīnah*: Not the Absence of Problems

From the perspective of the Qur'an, *sakīnah* or inner tranquility cannot be understood as a state in which a person is entirely free from problems, sorrow, fear, or the pressures of life. Human beings inevitably encounter various situations that trigger emotional responses, as life is inseparable from trials, loss, uncertainty, and changing circumstances. Therefore, the tranquility mentioned in Q.S. Al-Ra'd [13]: 28 is best understood as a state of heart stability when facing such situations. Thus, the presence of fear (*khawf*) or sorrow (*ḥuzn*) does not automatically conflict with *sakīnah* (Aini and Halim 2026, 266). A person may experience fear regarding something yet to happen or sorrow over something that has already occurred yet still possess inner steadfastness because their heart is oriented toward and grounded in faith in Allah.

This distinction is crucial because *sakīnah* is not synonymous with the

elimination of all negative emotions. In the context of *khawf* (fear), for instance, fear may arise when a person faces potential danger or an unwelcome future event. Similarly, *ḥuzn* (grief/sadness) can emerge in response to loss or an unpleasant occurrence. Both states are part of the human experience (Yusof et al. 2024, 94). The issue lies not merely in the emergence of these emotions, but in how a person responds to and interprets them. In the context of Q.S. Al-Ra'd [13]: 28, *dhikrullāh* (remembrance of Allah) provides a spiritual orientation that enables the heart to navigate these emotional states without losing faith or direction. Therefore, *sakīnah* is best understood as stability in the face of emotions, rather than the absence of emotion.

This understanding also demonstrates that inner tranquility is not synonymous with a life that always unfolds according to human desires. A person possessing *sakīnah* can still face failure, loss, uncertainty, and various forms of trials. However, such circumstances do not entirely dictate their inner orientation. *Dhikr* restores human awareness to Allah, shifting focus away from mere problems toward meaning, conviction, and reliance upon Him (Azmi and Salsabilah 2024, 125). Within this framework, tranquility serves as an inner strength for confronting reality, rather than a means of avoiding it. Thus, *sakīnah* does not eliminate life's challenges but transforms one's inner stance when facing them.

On this basis, *sakīnah* in Q.S. Al-Ra'd [13]: 28 can be understood as a steadfastness and stability of the heart that enables a person to face fear, sorrow, and uncertainty without losing their orientation toward Allah. This understanding also establishes an important boundary for the dialogue between the Qur'anic concept and psychological approaches. Spiritual tranquility should not be equated with a state free from stress or all unpleasant emotions. Rather, the psychological dimension can explain how an individual responds to and manages their emotional experiences, while the Qur'anic perspective provides the spiritual foundation regarding the object toward which the heart is directed and the source of that tranquility. Thus, *sakīnah* is not a state devoid of problems, but rather an inner state that empowers a person to confront challenges with faith, awareness, and steadfastness of heart.

Conclusion

Q.S. Al-Ra'd [13]: 28 highlights the causal relationship between *dhikr* and psychological tranquility. The use of the imperfect verb (*fi'l mudā'irī*) in the term *taṭma'innu* signifies that *sakīnah* represents an ongoing and dynamic process rather than a temporary emotional state. These classical exegetical insights correspond with findings from contemporary neuroscience, which indicate that repetitive engagement in *dhikr* may be associated with several neurocognitive effects: decreased amygdala reactivity, potentially reducing fear and anxiety responses; increased activation of the prefrontal cortex, supporting self-regulation, emotional control, and attentional stability; and enhanced alpha-theta oscillatory

activity, which is linked to deep relaxation and emotional equilibrium.

In this study, neuroscience is not employed as a means of validating or proving the truth of the Qur'an. Rather, it functions as an explanatory framework for understanding the biological mechanisms involved in spiritual practices that have already been described within revelation. The novelty of this research lies in proposing a Qur'anic Cognitive Science framework that integrates three analytical dimensions: Qur'anic linguistic analysis, neuroscience and cognitive psychology, and classical exegetical perspectives. Through this framework, *dhikr* is understood as a system of consciousness development rather than merely a normative religious practice.

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