

## **Work-Life Balance in Managing Stress, Job Satisfaction and Performance: The *Wasatiyyah* Concept and Neuroscience Perspective**

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### **Abstract**

*The relationship between work-life imbalance with occupational burnout, and poor mental health outcomes have been widely explored. This working paper aimed to determine how the concept of equilibrium (balance) and moderateness in Islam, or wasatiyyah, could shed some light on this issue. This paper discussed the aspects that needed to be emphasized based on the wasatiyyah concept in work-life balance in managing stress, job satisfaction and work performance. The equilibrium state of four elements which comprised of biological, psychological, social, and spiritual can help to manage contemporary stress-related issues. In addition, the application of wasatiyyah concept can modulate the network and hormonal organization inside our brain, which subsequently affect the performance of our daily work and activities. This ethics component in Islam is integrated in the daily life of a Muslim and bring all-round benefits, from managing stress, job satisfaction to the performance at work.*

**Keywords:** *Wasatiyyah; Work-life balance; Work performance; Stress; Neuroscience*

### **Introduction**

The primary factor influencing the level of work performance in the modern day is the harmony between work and daily activities, also referred to as work-life balance (WLB). WLB is a condition of equilibrium where the demands of an individual's work and personal lives are perceived from the same perspective (Gautam & Jain, 2018). A principle that states that people's various responsibilities might sometimes conflict with one another can be used to explain the idea of WLB (Grzywacz & Marks, 2000). As a result, these people struggle to balance their personal life with their professional responsibilities (Feeney & Stritch, 2019). Working individuals struggle to find work that they are satisfied whilst also fulfilling their obligations to their families and employers. The application of WLB in a person's life will have a significant impact on achieving their highest level of career potential, happiness, and life satisfaction.

According to the idea of "*ad-deen*," or a way of life, Islamic teachings address every area of human existence and result in a balanced person by concurrently addressing

both their spiritual and material requirements. In Islam, there is a principle known as *wasatiyyah* which is loosely translated as moderation and describes the ideas of equilibrium and balance (Tengku Muda et al., 2019). All of Allah's creatures are to live in balance, just as He created nature and all life in harmony. *Wasatiyyah* generally derives from the Arabic root word "al-wasat," which signifies compromise, equilibrium, balance, and declaration (Omer, 2015).

The issue of work-life balance can have negative impacts on individuals, society, organisations, and even to the country. In order to address this problem, this paper emphasises a *wasatiyyah* idea that is harmonious from an Islamic viewpoint. It discusses the idea of *wasatiyyah* as well as how this equilibrium state concept is used in WLB to manage stress. Moreover, this paper will also discuss on how WLB can modulate the network and hormonal organisation in the brain, which subsequently affects the performance of our daily work and activities. Therefore, this paper puts forth the centralization, equilibrium, and moderation values found in the *wasatiyyah* paradigm as solutions to new issues in stress management and work performance, and how it can be explained from the neuroscience point of view.

### **Work-Life Balance (WLB)**

The degree to which a person must manage a balance between their work and family obligations is known as their WLB (Greenhaus J. H., Collins, & Shaw, 2003). People with high WLB successfully balance all of their major life activities, such as family development, personal growth, community involvement, or recreation, with their career-related work. It was found that the benefits of WLB included better physical and mental health,

higher levels of life satisfaction, efficient time management, more control over one's working life, and the capability to manage priorities, and a decrease in work stress (Tengku Muda et al., 2019).

On the other hand, the negative effects of an unbalanced work-life balance have been acknowledged, and they include poor coping, illness, absenteeism, staff conflict, and substance addiction (Howlett et al., 2015). Work-life imbalance and occupational burnout appear to be significantly correlated, while it is still unclear which one contributes to the other. The modern era's unbalanced approach to work and living may in part be a result of technology's invasion into a variety of areas of life (Bloom, 2015). Therefore, even outside of an occupational setting, people have a duty to report to work. Additionally, it was claimed that the alteration of gender roles and the length of compulsory work hour per weeks in several occupational areas had also harmed the harmony between work and life (Bittar & Nicholas, 2018). This resulted increased sick leaves (Agosti, Andersson, Ejlertsson, & Janlöv, 2015), high turnover (Kim & Windsor, 2015) and elevated risk factors for a number of refractory bodily and mental diseases which are also present among the workers (Caspi & Moffitt, 2018).

The relationship between inadequate workload management at work and its temporal relationship with temperament and mental health disorders has attracted research in recent decades (Maslach, Schaufeli, & Leiter, 2001; Swider & Zimmerman, 2010; Weber & Jaekel-Reinhard, 2000). The terms "work-life balance," "work-family conflict," and "work-non-work interface" are frequently used interchangeably to describe what is currently becoming "mainstream" of work-life issues (Shanafelt et al., 2012). As a

result of being overworked, these terms denote “a lack of time for personal affairs” such as routine family responsibilities, regular exercise, and other forms of social life (Al Balushi et al., 2021).

Therefore, stress may be brought on by an individual’s inability to manage their time effectively between work and life. In this situation, people are exposed to a variety of stressors, such as physical ones like work demands, illnesses, or poor nutrition, mental ones like depression and anxiety, and situational ones like roles and responsibilities of being a husband or wife, son or daughter, or employee (Cosh & Tully, 2015; Moore et al., 2021). Stress affects people all around the world in different countries, communities, and cultures, making it a sensitive state and a worldwide concern. There are some types of stress that have good effects, therefore not all forms of stress result in adverse situations (Hollon, Burgeno, & Phillips, 2015). For instance, eustress, as it is known, may increase motivation to succeed or promote self-enrichment. When compared to stress that has a negative effect or anguish, stress that has a beneficial effect is different (Bienertova-Vasku et al., 2020). When under stress, the question arises on how one could balance one’s inner and outside selves (Parker & Ragsdale, 2015).

It has been demonstrated that a work-life balance mismatch affects not only the range of emotions that exist in our brains but also our ability to think clearly and perform effectively at work. It was studied that various work-life balance levels result in deteriorated general information processing, cognition, or more precisely, neuropsychological functioning (Al-Adawi et al., 2022). Additionally, people who report a work-life imbalance differ considerably from those who do not, in terms of executive

functioning, learning, memory, attention and focus, all of which have an impact on performance. The individuals’ ratings on affective scales varied significantly as well, and those who had a work-life imbalance displayed high levels of worry (Al-Adawi et al., 2022).

Numerous recent WLB studies have been conducted and have an emphasis on western regions of the world (Greenhaus J. & Powell, 2006; Herman & Lewis, 2012), where the main flaws in the current understanding of the WLB issue have been identified (Warhurst, Eikhof, & Haunschild, 2008). The first domain is concerned with the ongoing discrepancy between superiors’ and subordinates’ goals in WLB. The second has to do with how “work” and “life” differ from one another. The “balance” of using the same amount of time and energy for work and life has to be differentiated. It takes into account how time is perceived and suggests that the idea of the word “balance” refers to devoting the same amount of effort and time to work-related and non-work-related activities is a false dichotomy. The third relates to the notion that family is the only thing that matters in life and that work will have a negative impact on employees’ personal lives (Ranjan & Prasad, 2013). These flaws might run counter to the ideal concept and true definition of WLB in attaining a genuine balance, moderation, and equilibrium between work and life, which can then be translated into the enhancement and optimisation of our brain’s performance. As a result, the genuine definition of WLB is one that applies the idea of moderation to every part of our lives. Islam has in fact offered this all-inclusive solution through the idea of *wasatiyyah*.

### **Wasatiyyah Concept in Islam**

*Wasatiyyah* originates from the Arabic word *al-wasat*, which has the meanings of announcement, balance, and middle ground (Omer, 2015). Al-Qaradawi (2011) had previously expressed the idea of *wasatiyyah* as regulated rights, which are accepted rights brought about by moderation and not outside the bounds established by Islamic law. Furthermore, it was said that the idea of *wasatiyyah* and its ramifications has been revived in the context of conveying a real Islamic message to the rest of the world.

The features of *wasatiyyah* that should be used in daily life are also revealed by the description of *wasatiyyah* found in the Qur'an. Being just, the best, modest, perfect, not extreme, moderate, and balanced, within terms of one's spirituality, are among the qualities listed (Al-Suyuti, 2017). Understanding this idea is essential for putting it into practise, and it should be underlined how important it is so that people are aware of the reason why it is being used. The platforms of *wasatiyyah* are based on faith, knowledge, and *taqwa* which could be used to benefit from its features. In fact, the al-Qur'an and as-Sunnah were used as the foundation for these three platforms.

The path of faith (*iman*) leads to excellence and virtue by moral behaviour and abstaining from forbidden things (Hassan, 2011). The pursuit of knowledge results in justice through morality, strength, and power (Al-Ghazali, 2002). Finally, pursuing God-consciousness or *taqwa* would lead to equilibrium or moderation, which can be accomplished through tolerance and world peace (Hassan, 2011). If these three platforms are executed properly, additional benefits like productivity, pleasure, mercy or

forgiveness, and *taufiq* will be integrated into the person during the process of achieving equilibrium in a holistic manner. This holistic equilibrium is also referred by Allah SWT as *al-falah* (holistic prosperity) which covers every aspect of human life (Dorloh & Yusuf, 2015).

### **The relationship between *wasatiyyah* and managing stress**

Maintaining a balance from a biological, psychological, social, and spiritual perspective is crucial in managing stress as these components are already present in a person. These four factors can be used to assess a person's overall health condition. A person cannot be considered to be healthy overall if one of these components is disturbed. The social aspect also has an impact on the psychological and biological components since each one gives a context relationship to the system (Miresco & Kirmayer, 2006).

*Wasatiyyah's* spiritual foundation is likened to a well-constructed structure. It has a strong foundation of the Sunnah and the Qur'an. If the Qur'an and Sunnah are not the core elements of this basis, it can be justified that spiritual development will halt. Next, faith, knowledge, and *taqwa* form the wall that protects the main building. The presence of qualities of these three elements within a Muslim is demonstrated by the application of goodwill, excellence, equilibrium, and moderation. When this faith is tested, especially tests that come in the form of stress in daily life, a Muslim who has faith won't be affected.

Allah SWT puts individuals through several sorts of hardship, including dread, starvation, and a lack of possessions and wealth. Therefore, the only people who will gain the greatest honour and goodness from

the almighty Allah SWT are those who are patient or “exhibit sabr” when confronted with these afflictions. The various tests described in the Qur’an can also be classified from the viewpoints of biology (hunger), psychology (fear), society (lack of property and soul), and religion (the value of patience) perspective.

When a Muslim demonstrates devotion to Allah SWT by engaging in prayer, obeying Ramadan’s fast, offering alms (zakat), and performing the Hajj, *taqwa* is created inside the person. Daily acts can be considered a sort of ‘ibadah,’ or worship, to Allah SWT. This is different from ceremonial worship. In his interactions with non-Muslims, the Prophet Muhammad SAW also demonstrated a tolerant outlook (Hassan, 2011). Thus, it could be concluded that a person’s value of *taqwa* ensures not only a relationship with Allah SWT but also the nurturing of relationships between people of all races and religions. This relationship was also described as one that is eligible to receive Allah SWT’s blessings. Thus, if a Muslim develops social interactions, stress problems brought on by social factors won’t exist or be apparent because both relationships are in an equilibrium state (Salleh, 2013).

Spiritual expansion would be strengthened once knowledge, *taqwa* and faith had formed the wall. The spiritual feature would serve as the “roof” on which the person’s spiritual development would be constructed. *Al-falah*, which connotes success, is the equivalent of the “roof” in this context. *Al-falah* is possible if spiritual growth is perfectly constructed. Therefore, this ideal spiritual development would be effective in managing issues related to stress.

### **The relationship between *wasatiyyah*, job satisfaction and work performance**

According to the *wasatiyyah* concept, WLB in Islam includes observations of one’s mental and physical health. This is consistent with the requirement to uphold and safeguard the five pillars of Islamic law—protection of faith, intellect, self-worth, descent, and property (Tengku Muda et al., 2019). Islam forbids any activity or action that against any of the five goals of the Islam. The aim of creating a balance between work and life should emphasise these five fundamentals. Islamic principles state that keeping balance in one’s life comes from one’s beliefs, practises, relationships, ideas, and everyday activities (Tengku Muda et al., 2019). Effective time management is also necessary for achieving work-life balance. From an Islamic perspective, work value systematically takes into account all factors, including not only the moral and spiritual components of work values but also the practical aspects, such as the happiness at the workplace environment and job satisfaction (Khanifar, Matin, Jandaghi, Gholipour, & Hassanzadeh, 2011).

According to Parboteeah et al. (2009), Muslims frequently seek to balance the external and intrinsic components of their work to enhance their work performance. Work serves as a financial resource for survival (the preservation of life objective) and is beneficial for afterlife (i.e., providing alms or funding other activities) objectives. This is the extrinsic part. While working is seen as a source of independence and a tool to promote personal development, self-respect, contentment, and self-fulfilment, the intrinsic part also involves having a fulfilling career or a career that benefits society and others in a positive way (Achour, 2015).

Muslims need to strike a balance between work and family since they have a responsibility to act morally upright and wisely for their parents and family in addition to their employers and the individuals they interact with on a daily basis (Achour, 2015). A Muslim's responsibility and priority is to look after their family. *Wasatiyyah* will result in WLB based on Islamic principles, which will inevitably result in greater work output and Islamic job satisfaction. Employees who manage to balance work and personal obligations perform better on the job (Lee & Hasan, 2017). An individual can acquire Islamic view of job satisfaction and performance, especially *taqarrub*, *aqliyyah*, *nafsiyyah*, and *jasadiyyah*, with WLB achieved by the application of Islamic ethical standards. They will experience peace before, during, and after working because they believe that work is worship performed to please God, which subsequently made them a holistic well-being Muslim (Ismail, Halimatussaadiah, & Mohamad, 2014).

### **Implementation of *Wasatiyyah* and Its Effect on Equilibrium Inside the Brain**

Current technologies can systematically explore the neurological underpinnings of information processing in the brain and has been widely used in neuroscience research. It may be possible to use the current technologies to learn more about how activities of daily living may influence any apparent neural traces by using neuropsychological tools on the trajectory of WLB (Seligman & Brown, 2009). Studies have revealed that work-life imbalance is linked to cognitive degeneration as assessed by neuropsychological tools (Deligkaris, Panagopoulou, Montgomery, & Masoura, 2014; Diestel, Cosmar, & Schmidt, 2013). Additionally, it was also discovered that

workplace stressors and associated work-life imbalance frequently result in a cascade of harmful neurochemical changes that have an influence on the hippocampus and the prefrontal cortex; two brain areas that are vital to higher cognitive performance. (Lupien & Lepage, 2001; McEwen, 2005). Furthermore, it has been found from a number of studies that a protracted imbalanced work-life patterns frequently lead to an increase in neuro-hormonal activity, which in turn cause a loss of brain volume in regions critical to cognition (Lupien & Lepage, 2001; McEwen, 2005).

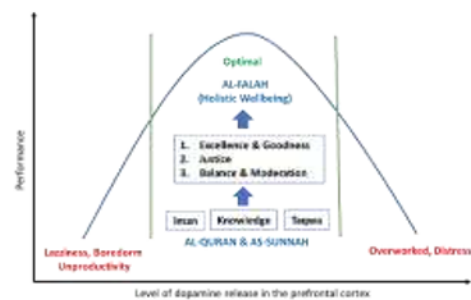
Human performance at work could be impacted by WLB's effect on modulating the anatomical and functional organisation of the brain. Our knowledge of the fundamental neurological processes underlying human performance has grown for the past three decades. The emergence of powerful and accessible neuroimaging techniques, which allow for non-invasive analysis of the "brain at work," has fuelled advancement in the discipline. These technological advancements gave rise to the multidisciplinary discipline of neuroergonomics; the study of how the human brain affects performance at work and in daily life (Parasuraman, 2003). By combining principles from ergonomics, neurology, and human factors, neuroergonomics sheds light on how the brain functions and the behavioural outcomes that result in work and daily life interact (Dehais, Karwowski, & Ayaz, 2020).

A brain region known as the prefrontal cortex (PFC) is frequently acknowledged as the neurophysiological foundation for limited resources (Modi, Singh, Yang, Darzi, & Leff, 2017; Parasuraman, 2003). The PFC is in charge of controlling higher-order cognitive functions like action selection, working memory retrieval,

monitoring, and inhibition. (Ramnani & Owen, 2004; Ridderinkhof, van den Wildenberg, Segalowitz, & Carter, 2004). High levels of cognitive demand frequently cause this area to become active (Fairclough, Ewing, Burns, & Kreplin, 2019) and impairment of this structure is known to reduced performance (Dolcos & McCarthy, 2006). The PFC is a complex region where dopamine and noradrenaline neuromodulation have a quadratic effect on how it functions (Arnsten, Wang, & Paspalas, 2012). Noradrenaline is a chemical messenger, called as neurotransmitter that mediates arousal (Chrousos, 2009) while dopamine is recognised to have a role in the processing of reward (Schultz, 2002).

The ability of Muslims to balance work in their career with all other important life activities, in line with the requirement to uphold and safeguard the five pillars of Islamic law—protection of faith, intellect, self-worth, descent, and property—, is reflected in the Islamic concept of *wasatiyyah* in WLB (Tengku Muda et al., 2019). The balance of our neurotransmitter levels, such as dopamine inside our brain will be reflected by efficiently managing everyday activities by dividing our time in balance between work and other important tasks based on this law (Robbins & Arnsten, 2009). Laziness, unproductivity, and feeling a lack of purpose in life will lead to reduction of neurotransmitter and reduce the rate of noradrenergic and dopaminergic PFC neuronal firing while too much stress and overworked will cause excessive levels of these neurotransmitter levels which then cause deleterious effect by suppressing PFC neuron firing rate (Birnbaum et al., 1999). Both scenarios will result in poor performance at work. The reasonable amount of both chemicals is required to ignite and maximise our brain's cognitive capacity, according to the

inverted-U interaction of both chemicals with PFC neurons (Robbins & Arnsten, 2009). The ideal definition of *wasatiyyah* in Islam when it comes to describing work-life balance includes having an attitude based on religious principles, working at one's peak potential, competing fairly, fulfilling commitments, and cooperating harmoniously and without prejudice (Udin, Dananjoyo, Shaikh, & Vio Linarta, 2022). This concept which is in line with the ideal method of WLB will create the optimisation level of dopamine inside the brain, hence enhancing the job satisfaction and performance at work (see Figure 1).



**Figure 1.** The PFC is under the Quadratic Regulation of the Dopamine Pathway.

While a sufficient concentration enables the best executive functioning, a low or excessive release of this neurochemical inhibits PFC activation (Robbins and Arnsten, 2009). These neurological considerations provide intriguing details to the understanding of the dynamic adaptation theory and the inverted-U law's mechanics. The concept of *wasatiyyah* in Islam is in line with the ideal method of WLB to achieve the optimization level of this neurotransmitter of the brain, hence enhancing the job satisfaction and performance at work.

The findings from previous study led to new insights on why the study of the brain

is essential in understanding the physiology of how the work-life balance could impact the structural and functional organization of the brain, hence interventions based on the implementation of *wasatiyyah* in managing work-life balance could be valuable in managing stress, increasing job satisfaction and enhancing work performance.

## Conclusion

A Muslim's primary objective is to seek Allah's pleasure. Shariah offers direction and encouragement for leading such a life. The desire to "please Allah" has a profound impact on a person's psyche and mindset and strengthens their spirituality. With such ability, individuals maintain their focus by avoiding temptations from the outside world. A Muslim's life is based on three fundamental concepts that help him or her attain balance in life: *tauhid*, role as *khalifah* and *akhirah* (Akhtar, 1996). Islam's emphasis on ethics is integrated into a Muslim's day-to-day activities and has a positive impact on all aspects of their lives, from personal relationships to professional performance. When it comes to biological, psychological, social, and spiritual factors in stress management, the *wasatiyyah* idea brings the vital spiritual aspect according to the Islamic context. The neuroergonomic framework also recognises the value of using the *wasatiyyah* idea to improve performance at work. If the spiritual element develops around the idea of *wasatiyyah*, then the biological, psychological, and social elements will be in an equilibrium state, allowing every Muslim to experience happiness, job satisfaction, and high work performance both in this life and the hereafter.

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## References

- Achour, M. (2015). Islamic spirituality and entrepreneurship: A case study of women entrepreneurs in Malaysia. *The Journal of Happiness & Well-Being*, 3, 41-56.
- Agosti, M. T., Andersson, I., Ejlertsson, G., & Janlöv, A. C. (2015). Shift work to balance everyday life - a salutogenic nursing perspective in home help service in Sweden. *BMC Nurs*, 14(1), 2. doi:10.1186/s12912-014-0054-6
- Akhtar, M. R. (1996). Towards an Islamic Approach for Environmental Balance. *PSN: Sustainable Development (Topic)*.
- Al-Adawi, S., Alameddine, M., Al-Saadoon, M., Al Balushi, A. A., Chan, M. F., Bou-Karroum, K., . . . Al-Harthi, S. M. (2022). The magnitude and effect of work-life imbalance on cognition and affective range among the non-western population: A study from Muscat. *PLOS ONE*, 17(2), e0263608. doi:10.1371/journal.pone.0263608
- Al Balushi, A., Alameddine, M., Chan, M. F., Al Saadoon, M., Bou-Karroum, K., & AlAdawi, S. (2021). Factors Associated With Self-Reported Medical Errors Among Healthcare Workers: A Cross-Sectional Study From Oman. *International Journal*



- for *Quality in Health Care*, 33. doi:10.1093/intqhc/mzab102
- Al-Ghazali, Abu Hamid Muhammad. (2002). *Ihya Ulum al-Din*. Beirut: Dar al-Kutub al-Ilmiyyah
- Al-Qaradawi, Y. 2011. *Kalimat fi al-wasatiyyah al-Islamiyyah wa maalimiha*. Qahira: Misr, Dar alShuruq.
- Al-Suyutiy, J. D. 2017. The tafsirs (F. Hamza, Trans.). Accessed from <http://www.altafsir.com/>.
- Arnsten, A. F., Wang, M. J., & Paspalas, C. D. (2012). Neuromodulation of thought: flexibilities and vulnerabilities in prefrontal cortical network synapses. *Neuron*, 76(1), 223-239. doi:10.1016/j.neuron.2012.08.038
- Bienertova-Vasku, J., Lenart, P., & Scheringer, M. (2020). Eustress and Distress: Neither Good Nor Bad, but Rather the Same? *Bioessays*, 42(7), e1900238. <https://doi.org/10.1002/bies.201900238>
- Birnbaum, S., Gobeske, K. T., Auerbach, J., Taylor, J. R., & Arnsten, A. F. (1999). A role for norepinephrine in stress-induced cognitive deficits: alpha-1-adrenoceptor mediation in the prefrontal cortex. *Biol Psychiatry*, 46(9), 1266-1274. doi:10.1016/s0006-3223(99) 00138-9
- Bittar, P. G., & Nicholas, M. W. (2018). The burden of inbox-messaging systems and its effect on work-life balance in dermatology. *J Am Acad Dermatol*, 79(2), 361-363.e361. doi:10.1016/j.jaad.2017.12.026
- Bloom, P. (2015). Work as the contemporary limit of life: Capitalism, the death drive, and the lethal fantasy of 'work-life balance'. *Organization*, 23(4), 588-606. doi:10.1177/1350508415596604
- Caspi, A., & Moffitt, T. E. (2018). All for One and One for All: Mental Disorders in One Dimension. *American Journal of Psychiatry*, 175(9), 831-844. doi:10.1176/appi.ajp.2018.17121383
- Chrousos, G. P. (2009). Stress and disorders of the stress system. *Nat Rev Endocrinol*, 5(7), 374-381. doi:10.1038/nrendo.2009.106
- Cosh, S., & Tully, P. J. (2015). Stressors, Coping, and Support Mechanisms for Student Athletes Combining Elite Sport and Tertiary Education: Implications for Practice. *The Sport Psychologist*, 29(2), 120-133. doi:10.1123/tsp.2014-0102
- Dehais, F., Karwowski, W., & Ayaz, H. (2020). Brain at Work and in Everyday Life as the Next Frontier: Grand Field Challenges for Neuroergonomics. *Frontiers in Neuroergonomics*, 1. doi:10.3389/fnrgo.2020.583733
- Deligkaris, P., Panagopoulou, E., Montgomery, A., & Masoura, E. (2014). Job burnout and cognitive functioning: A systematic review. *Work and Stress*, 28, 107-123. doi:10.1080/02678373.2014.909545
- Diestel, S., Cosmar, M., & Schmidt, K.-H. (2013). Burnout and impaired cognitive functioning: The role of

- executive control in the performance of cognitive tasks. *Work & Stress*, 27(2), 164-180. doi:10.1080/02678373.2013.790243
- Dolcos, F., & McCarthy, G. (2006). Brain Systems Mediating Cognitive Interference by Emotional Distraction. *The Journal of Neuroscience*, 26(7), 2072. doi:10.1523/JNEUROSCI.5042-05.2006
- Dorloh, S., & Yusuf, K. B. (2015). *Wasatiyyah* and Islamic Values in Reinforcing Malay Muslim Ethnic Relations: A Case Study of Thai *Wasatiyyah* Institute for Peace and Development in Thailand. 2015, 3(2), 8. doi:10.15575/ijni.v3i2.1413
- Fairclough, S., Ewing, K., Burns, C., & Kreplin, U. (2019). Chapter 12 - Neural Efficiency and Mental Workload: Locating the Red Line. In H. Ayaz & F. Dehais (Eds.), *Neuroergonomics* (pp. 73-77): Academic Press.
- Feeney, M. K., & Stritch, J. M. (2019). Family-Friendly Policies, Gender, and Work-Life Balance in the Public Sector. *Review of Public Personnel Administration*, 39(3), 422-448. doi:10.1177/0734371x17733789
- Gautam, I., & Jain, S. (2018). *A STUDY OF WORK-LIFE BALANCE: CHALLENGES AND SOLUTIONS*.
- Greenhaus, J., & Powell, G. (2006). When Work And Family Are Allies: A Theory Of Work-Family Enrichment. *The Academy of Management Review*, 31, 72-92. doi:10.5465/AMR.2006.19379625
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work-family balance and quality of life. *Journal of Vocational Behavior*, 63(3), 510-531. doi:https://doi.org/10.1016/S0001-8791(02)00042-8
- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work-family interface: an ecological perspective on the correlates of positive and negative spillover between work and family. *J Occup Health Psychol*, 5(1), 111-126. doi:10.1037//1076-8998.5.1.111
- Hassan, Mohd. Kamal. (2011). *Voice of Islamic Moderation from the Malay World* (1 ed.). Perak Malaysia: EMIR
- Hassan, M. K. (2013). Conceptualization on the meaning of *wasatiyyah*. Proceedings from Second International Conference on Terrorist Rehabilitation and Community Resilience in Singapore. Singapore: Rafles City Convention Centre.
- Herman, C., & Lewis, S. (2012). Entitled to a Sustainable Career? Motherhood in Science, Engineering, and Technology. *Journal of Social Issues*, 68, 767-789. doi:10.1111/j.1540-4560.2012.01775.x
- Hollon, N. G., Burgeno, L. M., & Phillips, P. E. (2015). Stress effects on the neural substrates of motivated behavior. *Nat Neurosci*, 18(10), 1405-1412. https://doi.org/10.1038/nn.4114

- Howlett, M., Doody, K., Murray, J., LeBlanc-Duchin, D., Fraser, J., & Atkinson, P. R. (2015). Burnout in emergency department healthcare professionals is associated with coping style: a cross-sectional survey. *Emerg Med J*, 32(9), 722-727. doi:10.1136/emered-2014-203750
- Ismail, S., Halimatussaadiah, & Mohamad, B. (2014). The Role of Integrity as a mediator Between Work satisfaction and Work Performance in the Perspective of Islam: An Empirical Approach Using SEM/AMOS Model. *International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS)*, Vol. 2, Jan 2014, 71-84, 71-84.
- Khanifar, H., Matin, H. Z., Jandaghi, G., Gholipour, A., & Hassanzadeh, M. S. (2011). Identifying the dimensions and components of Islamic work values (IWV) for public services sector of Iran. *European Journal of Social Sciences*, 22, 246-261.
- Kim, M., & Windsor, C. (2015). Resilience and work-life balance in first-line nurse manager. *Asian Nurs Res (Korean Soc Nurs Sci)*, 9(1), 21-27. doi:10.1016/j.anr.2014.09.003
- Lee, S. T., & Hasan, N. (2017). Work-Life Balance and Job Satisfaction among Working Adults in Malaysia: The Role of Gender and Race as Moderators. *Journal of Economics, Business and Management*, 5, 18-24. doi:10.18178/joebm.2017.5.1.478
- Lupien, S. J., & Lepage, M. (2001). Stress, memory, and the hippocampus: can't live with it, can't live without it. *Behav Brain Res*, 127(1-2), 137-158. doi:10.1016/s0166-4328(01)00361-8
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology*, 52(1), 397-422. doi:10.1146/annurev.psych.52.1.397
- McEwen, B. S. (2005). Glucocorticoids, depression, and mood disorders: structural remodeling in the brain. *Metabolism: clinical and experimental*, 54(5 Suppl 1), 20-23. doi:10.1016/j.metabol.2005.01.008
- Miresco, M. J., & Kirmayer, L. J. (2006). The persistence of mind-brain dualism in psychiatric reasoning about clinical scenarios. *Am J Psychiatry*, 163(5), 913-918. doi:10.1176/ajp.2006.163.5.913
- Modi, H. N., Singh, H., Yang, G.-Z., Darzi, A., & Leff, D. R. (2017). A decade of imaging surgeons' brain function (part I): Terminology, techniques, and clinical translation. *Surgery*, 162(5), 1121-1130. doi:https://doi.org/10.1016/j.surg.2017.05.021
- Moore, A., Nguyen, A., Rivas, S., Bany-Mohammed, A., Majeika, J., & Martinez, L. (2021). A qualitative examination of the impacts of financial stress on college students' well-being: Insights from a large, private institution. *SAGE Open Med*, 9, 20503121211018122. doi:10.1177/20503121211018122
- Omer, S. (2015). Al-wasatiyyah and some of its implications for Islamic built environment. 23, 995-1014.

- Parasuraman, R. (2003). Neuroergonomics: Research and practice. *Theoretical Issues in Ergonomics Science*, 4. doi:10.1080/14639220210199753
- Parboteeah, K. P., Paik, Y., & Cullen, J. B. (2009). Religious Groups and Work Values: A Focus on Buddhism, Christianity, Hinduism, and Islam. *International Journal of Cross Cultural Management*, 9(1), 51-67. doi:10.1177/1470595808096674
- Parker, K. N., & Ragsdale, J. M. (2015). Effects of Distress and Eustress on Changes in Fatigue from Waking to Working. *Applied Psychology: Health and Well-Being*, 7(3), 293-315. doi:https://doi.org/10.1111/aphw.12049
- Ramnani, N., & Owen, A. M. (2004). Anterior prefrontal cortex: insights into function from anatomy and neuroimaging. *Nature Reviews Neuroscience*, 5(3), 184-194. doi:10.1038/nrn1343
- Ranjan, R. K., & Prasad, T. (2013). Literature Review Report on- "Work-Life Balance of Loco-Pilots (Railway Drivers) in India". *European Journal of Business and Management*, 5, 17-27.
- Ridderinkhof, K. R., van den Wildenberg, W. P., Segalowitz, S. J., & Carter, C. S. (2004). Neurocognitive mechanisms of cognitive control: the role of prefrontal cortex in action selection, response inhibition, performance monitoring, and reward-based learning. *Brain Cogn*, 56(2), 129-140. doi:10.1016/j.bandc.2004.09.016
- Robbins, T. W., & Arnsten, A. F. (2009). The neuropsychopharmacology of fronto-executive function: monoaminergic modulation. *Annu Rev Neurosci*, 32, 267-287. doi:10.1146/annurev.neuro.051508.135535
- Salleh, M. (2013). Spirituality and the New Form of Poverty Management. *The International Journal of Religion and Spirituality in Society*, 2, 89-102. doi:10.18848/2154-8633/CGP/v02i02/50997
- Schultz, W. (2002). Getting formal with dopamine and reward. *Neuron*, 36(2), 241-263. doi:10.1016/s0896-6273(02)00967-4
- Seligman, R., & Brown, R. A. (2009). Theory and method at the intersection of anthropology and cultural neuroscience. *Social Cognitive and Affective Neuroscience*, 5(2-3), 130-137. doi:10.1093/scan/nsp032
- Shanafelt, T. D., Boone, S., Tan, L., Dyrbye, L. N., Sotile, W., Satele, D., . . . Oreskovich, M. R. (2012). Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population. *Archives of Internal Medicine*, 172(18), 1377-1385. doi:10.1001/archinternmed.2012.3199
- Swider, B. W., & Zimmerman, R. D. (2010). Born to burnout: A meta-analytic path model of personality, job burnout, and work outcomes. *Journal of Vocational Behavior*, 76(3), 487-506. doi:https://doi.org/10.1016/j.jvb.2010.01.003

Tengku Muda, T. F. M., Syed, M., Ismail, S., Yusoff, Z., Salleh, S., Zakaria, N., & Wan Chik, W. (2019). Working Women and the Islamic Work-Life Balance Concept. *International Journal of Academic Research in Business and Social Sciences*, 9. doi:10.6007/IJARBS/v9-i11/6603

Udin, U., Dananjoyo, R., Shaikh, M., & Vio Linarta, D. (2022). Islamic Work Ethics, Affective Commitment, and Employee's Performance in Family Business: Testing Their Relationships. *SAGE Open*, 12(1), 21582440221085263. doi:10.1177/21582440221085263

Warhurst, C., Eikhof, D., & Haunschild, A. (2008). Out of Balance or Just Out of Bounds? Analysing the Relationship between Work and Life. In (pp. 1-21).

Weber, A., & Jaekel-Reinhard, A. (2000). Burnout syndrome: a disease of modern societies? *Occup Med (Lond)*, 50(7), 512-517. doi:10.1093/occmed/50.7.512

Yousef, D. A. (2001). Islamic work ethic – A moderator between organizational commitment and job satisfaction in a cross-cultural context. *Personnel Review*, 30(2), 152-169. doi:10.1108/00483480110380325