

## The Effect of Prayer on the Vigilance

Masoud Navidi Moghadam<sup>1</sup>, Samira al Sadat Hossieni Benvi<sup>2</sup>

<sup>1</sup>. Educator of psychology Group in Payame-Noor University

<sup>2</sup>. MA student of clinical psychology in Kish International Azad University

[Na.m.modern.psy@gmail.com](mailto:Na.m.modern.psy@gmail.com)

**Abstract:** The objective of the present study is to investigate the effect of prayer on vigilance which is one of important four functions of consciousness. This study was carried out as quasi-experimental and with scientific approach on 120 university students that were randomly tested by using Pittsburgh sleep quality questionnaire and semi-structured interview. Basis for comparison was to read the last verse of Surah Kahf before sleeping. Analysis of results was performed using ANOVA. ANOVA results indicate a prominent role of prayer and waking up as criteria in vigilance. The significance level of 'prayer' is equal to 0.01. In other words, the level of vigilance of students who read bedtime prayer is more than students who do not pray. Findings of this study give appropriate evidence in the areas of cognitive psychology and spirituality. In addition, the results of this study emphasize on its special role in empowerment and compatibility in one of important functions of consciousness as a strong source. There is a significant association between prayer and vigilance.

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### 1. Introduction

The simple concept of four-dimensional description of the old man's body and mind, the relationship dynamic, close and inseparable dimensions of physical, mental, social and spiritual turns (Bolhari et al, 2008, pp 37, 72). William James believed that each of us human beings, in which we are living within their natural boundaries are. Human forces are very diverse and rich. And usually do not pay attention to these forces sometimes can not even use them (Carnegie, 1956). It seems that humanity needs is love and devotion to God, the bond quality of emotional, cognitive and behavioral development time that a spiritual foundation for many behaviors and emotions is an (dust and Miner, 2011, P.: 111). Faith in God gives people hope and optimism and it increases (Aschyr & Carver, 1987, pp 169-210) and to those who believe that the root of a sense of control and efficacy of God's people (Pargamnt et al, 1987, p 269).

Belief in the role of prayer in changing the rules of the universe, turning in hopes that people will believe these things is happened (Shahsavand and others, 2003, p 20). Prayer is the language of the common elements of all (Salmanpour, 2005, p 21). Prayer is the act by written sources on the history of 5000 years ago is developed (Stephenson, 1950, pp 391 and 392).

Some including Taylor and Frazer believed that the earliest intelligent had the time to practice what we refer to today as a prayer backwards (Zaleski and Zaleski, 2006, pp 24 and 25).

The most important religious and spiritual practices of prayer are that although history is thousands of years old, but recently it has started a thorough investigation of the case (Rafiee, 2011, p 66). Allport stated: «link» The most important role in life.

Karl Research shows that prayer caused a marked spiritual vigor in humans so that it seems the same properties that lead to rapid healing of patients in the sanctuary Sometimes believing that God desires that all things in the universe are resourceful owner, dictate the thought process of some people that they are designed to explore some of the facts of a sudden and intuitive achieved. Sometimes God demands that the other time for some creative thinking, visions arise; this means that whenever Allah wills to His servants the prophets and apostles and other inspired it.

Psychologists former Muslim, have interpreted the concept of religious inspiration as to what is in the Qur'an, there is harmony. For example, Ibn Sina, the inspiration for some of the people who are awake or asleep dreaming occurs from contact with the Divine Breath or knows (Carl, 1980, p 170). In this regard, listed as a skill, the ability to remember God name of God was considered (salvation, 2009, pp 255 and 256). It seems, prayers and other devotional acts by stimulating positive emotions as a way to relieve the pressure, the pressure of everyday life for us. In general, the law-of worship, a sense of sympathy and support (Koenig & Larson, 2001, pp 67-78).

The Persian breed, Sajjad (2011, p 117) suggests that cognitive factors associated with finding meaning, the effect of the relationship with God, mystical experiences, negative experiences of social and spiritual activities and behavioral components of future orientation mediator plays. The descriptive research library by Zare and Nicksefat (2011, p. 66) concluded that the wisdom of cognitive structures and conceptual powers is the ability to perceive and recognize facts, policy issues related to the issues worldly, otherworldly, and so on.

Science as a set of skills and knowledge that has been acquired or in-person to enter the human mind and intellect and the content of the training process, the structural abilities and faculties of the intellect for potentiality to actuality have been converts. For example, sometimes without having to look at the time we recognize and soon we can go from sleep to wakefulness and wakefulness to sleep.

Each of us lives in term of speed over time we complain but do not know how to get this time goes beyond our understanding; we felt the time is not because we do not understand what is going on. But the only time we see the visual analog scale of hours ago, but we do not feel the passage of time. Speed time for a unit that can be solved in time and as such is the nature of our existence; we are not able to feel the quality. In the brain, the part is sometimes the cases that interrupt occur often.

Signals resulting in the interruption occurs, it can break other parts of the state and the individual is awake, similarly, the proportion of mothers who slept with his child over the head if he does not wake up screaming kill, because it was the Pause mode, but on the other hand breaks the sound produced by the smallest child awakens, milling is the most severe storms will sleep sometimes may be awakened by the sound of wagon wheels (Freud, Adler, and Asimov, 1978, pp 28, 184 and 185) and expected term of the cognitive concepts (Zare, 2009, p 116).

It seems that this is expected to be associated with. Among the highlights will be given attention is the cognitive process of selectively concentrating, when one side ignores other aspects of the environment. Attention is also called as the allocation of processing resources (Anderson, 2004, p 519).

Motivations and values influence the individual's knowledge and Adraksh. The results of new empirical studies, this issue has been proved (Nejati, 2009, pp 255 and 256). One of the issues that matter greatly to the study of psychology, especially cognitive neuroscience was considered. Note, the scope of research in education, psychology and neuroscience have used in the past. Area of active

research, including the production of source signals regarding the effects of these signals on the tuning properties of sensory neurons, and the relationship between cognitive processes such as working memory and attention and listen to the ring.

The question of interest in learning is an important factor. The chapters of the Quran, In the meantime, listen to the ring and the detection of signals of interest is the main functions of (Sternberg, 2009, 142). In modern psychology, ear ring, also called a period of sustained attention and the ability to maintain attention and alertness over long periods of time defined (Warm, Parasuraman and Matthews, 2008, pp 293-300).

During this time, the appearance of a stimulus person will try to identify the specific target. Now there are unique stimulus signal may occur at an unknown time (Sternberg, 2009, p 142). In general, the ring waiting passively listened to stimuli signaling the birth. Sternberg (2010, pp 122 and 126) the ability to focus for long periods of stimulation refers to a field in which one seeks to trace the emergence of a specific stimulus or target of interest is at home. When a person is alert, carefully waiting to sign stimulus that may appear within the specified time-trace.

Usually, in situations where it is necessary to be alert to a specific stimulus occurs only rarely, but as soon as the outbreak requires immediate attention, it seems that the attention of the tracking signal processing, are highly localized and are strongly influenced by expectations. Under many conditions, reducing ear ringing in the first 15 minutes of the carried interest (Titchener, 1974, pp 339-353), but if the demand is high, the reduction in detection performance can occur more quickly (Hltvn and et al, 2007, pp 549-552), they occur in the execution of the task for both experienced occurs (Mackay, 1984, pp 1-11).

Ear ring has traditionally faced with low demand and reduce ear ring with reduced cognitive stimulation, can cause low cognitive demand (Frankmn and Adams, 1965, pp 257-273), but the other reviews are not so widely held. Recent studies show that listening to the ring is a difficult task, requiring considerable cognitive resources and induce a considerable amount of stress (Parasuraman and Davies, 1977, pp 559-574). In explaining this subject, signal detection theory or SDT, and by Green (1966), to describe task specificity-sensitivity detection performance, while supervisors assess both cognitive ability and willingness to respond, there was formulated. SDT assumes perceptual judgments under conditions of uncertainty are different monitoring activities. Using SDT to ring in the ears of study show that the vast majority of cases, hearing

loss is not true to life. Sensitivity is seen to decrease over time (Bravdinet, 1971).

Empirical evidence shows that event rates at a high level or sensitive event every 24 minutes significantly reduced. Further research has shown that when the discrimination is difficult, By comparison, simultaneously, in the event of both upper and lower body when the workload is low, can be lowered Williams, 1986, pp 567-579). In this case the clock, Mac Worth showed an increase in rates of rare events Irregular signal importance, leading to a decrease of the ear ring. When the signal "dummy" target signals vary considerably, improving performance measurement occurs (Mac Worth, 1963, pp 82-89).

Other dimensions beyond the speed events Task difficulty and discrimination in the performance of the duties of the classification ear ring ear ring there. These factors include sensory methods or combination of methods of sensory complexity of the source signal duration, signal strength, multiple resources, and discrete events to continuous, intermittent vs. continuous attention, monitoring skills and the stimulation (Parasuraman and Davies, 1977, pp 559-574).

In the late 1990s and early neuroimaging techniques such as positron emission tomography (PET), functional magnetic resonance imaging (fMRI) and Doppler ultrasound (TCD) to independently evaluate the brain activity and mental workload during task performance in listening tests began to ring. Also showed reduced activity in the prefrontal cortex is associated with reduced ear ring. Brain imaging studies show that the right hemisphere controls the ear ring may also be evident in many areas of the brain (2005). Excitation, which is part of the ear ring, every so often, not as an idea, but as the only source of the main effect of hearing loss seen in the ring was considered (1949).

Thus, the areas of the brain associated with arousal a vital role in the performance of duties ear ring games. Because the brain is the amygdala plays an important role in the recognition of emotional stimuli plays, it seems that the structure of the brain, plays an important role in regulating ear ring is (Sternberg, 2009, p 142).

It has been shown to activate the network devices in the sleep process, attention and emotional behaviors involved. Each other (1955) about the relationship between arousal and performance theory has been developed. He believes that the most effective stimulus is a sign function, it is necessary to generate RAS optimal level of arousal. When the excitation level is very low as long as the dream is incarcerated organism, sensory information received by the brain can be used. Similarly, when the arousal

level is high, a large amount of data to be analyzed by the cortex and often contradictory responses or behavior unrelated to follow companies. This means that the optimal functioning of the cortex and the resulting performance is optimal when arousal level is not too high and not too low.

Cortical areas of the brain associated with arousal, including the base of the brain cholinergic system and (LC) noradrenergic system is (Parasuraman, Warm, 1998, pp 221-256). Both components of the network-based activation system (RAS) are vital, respectively. The base of the brain, the cortical cholinergic system with acetylcholine release and is associated with arousal. Compounds inhibit the release of acetylcholine and GABA in the brain by listening to the ring accompanied by impaired function (Murray, Sartre and Bruno, 1993, pp 17-29). In general, different areas of the brain associated with attention and listen to the ring. These areas include parts of the right frontal, parietal, inferior prefrontal, temporal cortex and cingulate gyrus. The TCD in the frontal lobe fMRI data show that brain activity during the tasks of listening to life, activity in the right hemisphere increases.

In research that Asgari et al (2011, p 5) did show that with increasing age, and the changes will increase the content and motivation for prayer. In another study by Blotter et al (2006, pp 312-317) in central Switzerland University Wilhelm was shown gender and age differences in psychomotor performance under different pressure conditions of sleep listening to the ring acts differently and the effects of sleep pressure and circadian cycle on the performance of neural behavior can be a sensitive measure of mental ability - locomotive ear ring (PVT) was measured.

Comparison of PVT performance in 16 young (8 males, 8 females, 20-31 years) and 16 older healthy subjects (8 men and 8 women, 57-74 years) during 40 hours of sleep deprivation (SD, high sleep pressure) and 40-H, multiple nap protocol (NAP, low sleep pressure) under low light conditions in a state of constant cross section and a balanced, independent of age, sleep pressure conditions, women are significantly and considerably slower reactions (RTS) than men have exhibited. Its effect by increasing the time spent in both the NAP 40 hours and more clear that the SD protocol. Effect on women's sexuality as a different strategy when performing PVT, although the instructions are the same as a swift action was it is possible.

Research ear ring on various subjects the wide range of ages given the ability to maintain alertness and sustained attention have been done. (1991, pp 155-169). Brady, Parasuraman, 2001 difference in the overall level of consciousness and

ability to maintain attention over time for comparison adults (over 40) were demonstrated and young people.

The assignments require being alert, one of the event is expected to strongly affect the effectiveness of his answers in these cases, the efficacy of stimulants such as speed and accuracy of detection. However, the efficiency does not include the expectations of the stimulus (Posner, Snyder and Davidson, 1980). In any case, our attention is the sudden appearance of a stimulus (Sternberg, 2010, pp 122 and 126).

The aim of this study was to investigate the effect of the end of Sura Kahf verse prayer as an indicator of moral behavior a powerful source of empowerment and adaptation to life in the waking hours of sleep as an indicator of certain identification of stimuli in listening to the ring as one of the four major functions is given. For the study, three main questions are the following:

1. Do you read the prayer on university students' ears to ring? (Main effect of prayers)
2. Does the gender of the students involved in the student's ear ring? (Main effect of gender)
3. Whether the effect of the gender of their students prays on ear ring? (Interaction effects pray and gender)

## 2. Method:

This quasi-experimental study of 120 male and female students who were randomly assigned to

## 3. Findings:

Descriptive

Table 1. Describe the demographic characteristics

Percent	Frequency	Students	Demographic characteristics	No
50	60	Woman	Sex	1
50	60	Man		
80.8	97	19 to 25	Age	2
15.8	19	26 to 30		
3.3	4	Over 30		
80.8	97	BA	Educational level	3
19.2	23	MA		
18.3	22	Married	Marital status	4
81.7	98	Single		

1. The results showed that both men and women (boys and girls) to the size of the sample group were selected.

2. was older than the students participating in this study were between 19 and 25 years (ie 80.8 percent), while only 3.3% of subjects aged above 30 years.

two groups, with sleep quality certification, the Pittsburgh Sleep Quality and conducted a semi-structured interview was conducted among university students in Qom province was selected. Subjects in the age range 35-19Sal undergraduate degree or higher with at least the tasks performed in each group.

Experimental group assignment on a particular day in a week, after performing certain rituals, such as: Do not tell this to people, avoid eating heavy meals, wear comfortable clothes, sleeping in the Earth's magnetic poles, saying lies and avoidance of sin mortal and to repentance, by not eating, having done good work for the sake of Allah, before sleep, the blessings before and after the prayer and reading the prayer Soureh Kahf before sleeping, which begins with the name of God that the authoritative verses and traditions were explained by the control group during this period to continue their normal programs.

One week after the intervention, including the self-report forms were collected and waking hours. Regarding the statistical methods, statistical experts believe that Provided that the samples are random and independent of each other is derived from a population with a normal distribution and so randomly allocated to each Karbndy composition and number of observations in all possible combinations is equal to (Homan, 1383). And next to throughput, test the main and an interactive effect of the independent variables was used.

3. 80.8% of undergraduate students, were enrolled; and while the number of graduate students has declined 19.2 percent.

4. Only 18.3 percent of students were married. 81.7 percent say they are single.

Table 2. Distribution of hours for both groups of subjects (n=120)

Groups				Options	Time
With prayer		Without prayer			
Percent	Frequency	Percent	Frequency		
5	3	8.3	5	9-10	Hours of sleep
30	18	28.3	17	101-11	
51.7	31	50	30	11.1-12	
13.3	8	13.3	8	After 12	
100	60	100	60	<b>Total</b>	

According to Table 2:

1. 5% of subjects, who pray at bedtime, go to bed at 9 to 10 pm, while the number of subjects who were praying to sleep to be 8.3 percent.

2. Subjects went to bed after 12 hours in both groups was similar (3.13).

3. In both groups, higher frequencies of between 11 and 12 students who were attempting to sleep.

Table 3. Distribution of subjects' waking hours for both groups (n=120)

Groups				Options	Time
With prayer		Without prayer			
Percent	Frequency	Percent	Frequency		
33.3	20	0	0	4-5	waking hours
41.7	25	53.3	32	5.1-6	
25	15	46.7	28	6.1-7	
100	60	100	60	<b>Total</b>	

From Table 3 it can be deduced that:

1. 33.3% of students who pray at bedtime, between 4 pm to 5 am awake and while none of the students in the control group who were not awake at this hour.

2. Hours, waking only 25% of the experimental group (experimental group), between the hours of 6 and 7, respectively, compared to the control group (without prayer) to 46.7 percent increase.

Table 4. Distribution of ablution sleeping subjects in each group (n=120)

Groups				Options	Position
With prayer		Without prayer			
Percent	Frequency	Percent	Frequency		
100	60	6.7	4	With Ablution	Sleeping ablution
0	0	93.3	56	Without Ablution	
100	60	100	60	<b>Total</b>	

Information above table indicates that all subjects who pray before bed went to bed with an ablution, while only 6.7% of the control groups (no prayers) during sleep were ablution.

#### 4. Discussion and Conclusion

The first hypothesis whether university students' pray the lurch? (Main effect of reading the prayer) is approved. The result of this assumption is explored and the exploration of many scholars and spiritual resources of the Holy Quran (A'raf, 180, Nisa, 32, Ghafer, 60, and Rahman, 55), also, Posner, Snyder, and Davidson (1980), Bantys (1993), Sternberg (2006 and 2009), is consistent.

In other words, this study converged Research in this area suggests that prayer was used as

a specific spiritual, causes a person to wake up at the same time as listening to ringing in the performance index is considered.

The second hypothesis is whether students' gender, students in lurch? (Main effect of sex) is not approved. Therefore we can say that the gender of the students did not have them in the lurch.

The result of this assumption is explored and the exploration of many researchers as Blatter et al (2006, pp 312-317), Dayton, and Parasuraman (1993, pp 19-39) are inconsistent. Basis of gender and age differences in psychomotor performance under different conditions of the ear ring acts differently.

Its effect by increasing the time spent in both the NAP 40 hours and more clear that the SD protocol. Effect on women's sexuality as a different

strategy when performing PVT; although, the instructions are the same as a swift action has been important. Not only sleep and circadian cycles, but age and gender are important factors.

The third hypothesis whether the effect of prayers on alert students to their gender? (Reading, prayer and interaction effect of gender) is not approved. Therefore, we can conclude that the effect of "pray" over "being vigilant" the students "gender" is not their.

The result of this assumption is explored and the exploration of many such researchers (Levine, 1973, pp 149-157 and Blatter et al, 2006, pp 312-317) is inconsistent. Where refers to the fact that women are significantly and considerably slower reactions than men to have displayed. However, the categorization Green (1966), to describe SDT assumptions governing perceptual judgments of uncertainty in different and the use of SDT in the study of the ear to ring in the majority of cases, hearing loss is not correlated to ring true.

The limitations of this study include the lack of doctoral students and distribution of universities in the province with diverse disciplines mentioned. Other research has also suggested that other variables in the psychosocial adjustment and well-being deals in other provinces are also assessed. In general, according to the same research, prayer can be an important method in the paradigm of cognitive psychology, spiritual psychology, especially in combination with other methods used.

#### References:

1. Anderson, John R. (2004), Cognitive psychology and its implications, 6th ed. Worth Publishers.
2. Baker, C.H. (1963). Consistency of performance in two human vigilance tasks. *Vigilance: A Symposium*. New York: McGraw-Hill Performance.
3. Benson H, Dusek JA et al. (2006), Study of the Therapeutic Effects of Intercessory Prayer (STEP) in cardiac bypass patients: a multicenter randomized trial of uncertainty and certainty of receiving intercessory prayer, *American Heart Journal*, vol. 151, no. 4, pp. 762–774 .
4. Berardi, A., Parasuraman, R. & Haxby, J. (2001), Overall vigilance and Sustained Attention Decrements in Healthy Aging, *Experimental Aging Research*, vol. 27, no. 1, pp. 19-39.
5. Blatter K, Graw P, Münch M, Knoblauch V, Wirz-Justice A, Cajochen C. (2006), Gender and age differences in psychomotor vigilance performance under differential sleep pressure conditions, *Centre for Chronobiology, Psychiatric University Clinics, Wilhelm Kleinstr*, vol. 168, no. 2, pp. 312-317.
6. Broadbent, D.E. (1971). *Decision and Stress*, New York, Academic Press.
7. Chavajay, Pablo and Rogoff, Barbara (1999), Cultural variation in management of attention by children and their caregivers, *Developmental psychology*, vol. 35, no. 4, pp. 1079-1090.
8. David R. Hodge (2007), A Systematic Review of the Empirical Literature on Intercessory Prayer, *Research on Social Work Practice*, vol. 17, no. 2, pp. 174-187
9. Davies, D.R. & Tune, G.S. (1969). *Human Vigilance Performance*. New York: American Elsevier.
10. Deaton, J. & Parasuraman, R. (1993), Sensory and Cognitive Vigilance: Effect of Age on Performance and Subjective Workload, *Human Performance*, vol. 6, no. 1, pp. 71-97.
11. Fisk, A.D. & Schneider, W. (1981), Control and automatic processing during tasks requiring sustained attention: A new approach to vigilance, *Human Factors*, vol. 23, no. 6, pp. 737-750.
12. Frankmann, J.P. & Adams, J.A. (1962), *Theories of Vigilance*, *Psychological Bulletin*, vol. 59, no. 4, pp. 257-272.
13. Green, D.M. & Swets, J.A. (1966). *Signal Detection Theory and Psychophysics*, New York, Wiley.
14. Hampson, Peter (1987), *Attention and performance XI* : M.I. Posner and O.S.M. Marin (eds.), (Erlbaum, New Jersey, 1985) pp. xxvi + 675, £49.95, *Biological Psychology*, Volume 24, Issue 2, Pages 170-172
15. Harris WS, Gowda M., Kolb JW, Strychacz CP, Vacek JL, Jones PG, Forker A., O'Keefe JH, McCallister BD (1999), A randomized, controlled trial of the effects of remote, intercessory prayer on outcomes in patients admitted to the coronary care unit, *Arch Intern Med*, vol. 159, no. 19, pp. 2273-8.
16. Helton et al. (2007), The abbreviated vigilance task and cerebral hemodynamics, *Journal of Clinical and Experimental Neuropsychology*, vol. 29,no. 5, pp. 549-552.
17. Kerkhoff, G.A., van der Schaaf, T.W. & Korving, H.J. (1980), Auditory Signal Detection: Effects of long-term practice and time on task, *Perception and Psychophysics*, vol. 28, no. 1, pp. 79-81.
18. Koeing, H.G. & Larson, D.B. (2001), Religion and mental health: evidence for an association, *International Review of Psychiatry*, vol. 13, no. 2, pp. 67-78.

19. Leibovici L. (2001), Effects of remote, retroactive intercessory prayer on outcomes in patients with bloodstream infection: randomised controlled trial, PubMed.
20. Levine, J.M., Romashko, T., & Fleishman, E.A. (1973), Evaluation of an abilities classification system for integrating and generalizing human performance research findings: An application to vigilance tasks, *Journal of Applied Psychology*, vol. 58, no. 2, pp. 149-157.
21. McBride and D. Schmorrow (Ed.) *Quantifying Human Information Processing*, Lanham, Maryland: Rowman and Littlefield.
22. McCarley, J.S., Kramer, A.F., Wickens, C.D., Vidoni, E.D., & Boot W.R. (2004), Visual Skills in Airport Security Screening, *Psychological Science*, vol. 15, no.5, pp. 302-306.
23. Mackie, R.R. (1984). Research relevance and the information glut. *Human Factors Review*, Santa Monica, CA: Human Factors Society.
24. Mackworth, N.H. (1948). The breakdown of vigilance during prolonged visual search, *Quarterly Journal of Experimental Psychology*, vol. 1, no. 1, pp. 6-21.
25. Mackworth, N.H. (1950), *Researches on the measurement of human performance*. Med.Res.Council, Special Report., No. 268.
26. Mackworth, Jane F. (1963), The Effect of Intermittent Signal Probability on Vigilance. *Canadian Journal of Psychology*, vol.17, no. 1, pp. 82-89.
27. Mackworth, Jane F. (1964), Performance Decrement in Vigilance, Threshold, and High-Speed Perceptual Motor Tasks, *Canadian Journal of Psychology*, vol. 18, no. 3, pp. 209-223.
28. Mackworth, J.F. (1965), The effect of amphetamine on the detectability of signals in a vigilance task, *Canadian Journal of Psychology*, vol. 19, no. 2, pp. 104-117.
29. Mackworth, J.F. (1969). *Vigilance and Habituation*. Baltimore MD: Penguin.
30. Masters, K., Spielmans, G., Goodson, J. (2006), Are there demonstrable effects of distant intercessory prayer? A meta-analytic review, [Annals of Behavioral Medicine](#), vol. 32, no. 1, pp. 21-26.
31. Moore, H., Sarter, M. & Bruno, J.P. (1993), Bidirectional modulation of stimulated cortical acetylcholine release by benzodiazepine receptor ligands, *Brain Res*, vol. 596, no. 2, pp. 17-29.
32. Moray N., Fitter, M. Ostry, D., Favreau D., & Nagy, V. (1976), Attention to pure tones. *Quarterly Journal of Experimental Psychology*, vol. 28, no. 2, pp. 271-283.
33. Moruzzi, G. and Magoun, H.W. (1949) Brain stem reticular formation and activation of the EEG. *EEG Clinical Neurophysiology I*, vol. 1, no. 1-4, pp. 455-473.
34. Neuchterlein, K.H., Parasuraman, R. & Jiang, Q. (1983), Visual sustained attention: Image degradation produces rapid sensitivity decrement over time, *Science*, vol. 220, no.4594, pp. 327-329.
35. Nikoogoftar, M.,Dehghani, Z.,Farahani, B.(2011), Impact of prayer on spiritual well being in cancer patients undergoing chemotherapy, *Applied Psychological Research Quarterly*, vol. 2, no. 2, pp. 83-90.
36. Parasuraman, R. (1976), Consistency of Individual Differences of Human Vigilance Performance: An Abilities Classification Analysis, *Journal of Applied Psychology*, vol. 61, no. 4, pp. 486-492.
37. Parasuraman, R. & Davies, D.R. (1977). A taxonomic analysis of vigilance. In R.R. Mackie, (ed.) *Vigilance: Theory, operational performance and physiological correlates*, New York: Plenum.
38. Parasuraman, R. (1985) Sustained attention: a multifactorial approach.
39. Parasuraman, R. (1986). *Vigilance, Monitoring and Search* In J.R. Boff, L. Kaufmann & J.P. Thomas (Eds.) *Handbook of Human Perception and Performance*, Vol.2, Cognitive Processes and Performance, New York, Wiley.
40. Parasuraman, R. & Giambra, L. (1991), Skill Development in Vigilance: Effects of Event Rate and Age, *Psychology and Aging*, vol. 6, no. 2, pp. 155-169.
41. Parasuraman, R., Warm, J. & See, J. (1998). *Brain Systems of Vigilance in The Attentive Brain* R. Parasuraman (Ed), Cambridge MA, MIT Press.
42. Parasuraman, R. & Caggiano, G. (2005). Neural and genetic assays of mental workload. In D.
43. Pargament, Kenneth I., Echemendia, Ruben J., et al. (1987), the conservative church: psychosocial advantages and disadvantages, *American Journal of Community Psychology*, vol. 15, no. 3, pp. 269-86.
44. Roberts L, Ahmed I, Hall S, Davison A, (2011), Published Online: <http://summaries.cochrane.org/CD000368/intercessory-prayer-for-the-alleviation-of-ill-health>.
45. Rohrbaugh, J.W., Stapleton, J.M., Parasuraman, R., & Zubovic, E.A. (1987), Dose-related effects of ethanol on sustained attention and Event Related Potentials, *Alcohol*, vol. 4, no. 4, pp. 293-300.

46. Shaw, T.H., Warm, J.S., Finomore, V., Tripp, L., Matthews, G., Weiler, E. & Parasuraman, R. (2009), Effects of sensory modality on cerebral blood flow velocity during vigilance, *Neuroscience Letters*, vol. 461, no. 3, pp. 207-211.
47. Scheier, M.F., Carver, C.S. (1978), Dispositional optimism and physical well-being: the influence of generalized outcome expectancies on health, *Journal of Personality*, vol. 55, no. 2, pp. 169-210.
48. Steriade, M. (1996), Awakening the brain, *Nature*, vol. 383, pp. 24-25.
49. Lundberg, U. & Frankenhaeuser, M. (1979). Pituitary-adrenal and sympathetic adrenal correlates of distress and effort (Report 548). Stockholm, Sweden: University of Stockholm, Department of Psychology.
50. Solandt, D.Y. & Partridge, D.M. (1946), Research on auditory problems presented by naval operations. *Journal of the Canadian Medical Service*, vol. 3, pp. 323-329.
51. Sternberg, Robert (2009). *Cognitive Psychology*, Belmont: CA: Wadworth Cengage Learning.
52. Teichner, W.H. (1974), The detection of a simple visual signal as a function of time on watch. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 16, no. 4, pp. 339-353.
53. Uenking, M. (2000), Pilot Biofeedback Training in the Cognitive Awareness Training Study, *American Institute of Aeronautics and Astronautics, Proceedings 2000*, pp. 1-8.
54. Warm, J., Parasuraman, R., & Matthews (2008), Vigilance Requires Hard Mental Work and Is Stressful, *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 50, no. 3, pp. 433-441.
55. Wiliges, R.C. (1976). The vigilance increment: An ideal observer hypothesis. In T.B. Sheridan and G. Johannsen (Eds.) *Monitoring Behavior and Supervisory Control*, New York, Plenum.
56. Williams, P.S. (1986), Processing demands, training and the vigilance decrement, *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 28, no., pp. 5, pp. 567-579.
57. Zaleski, Carol; Zaleski, Philip (2006) *Prayer: A History*, Boston, Mariner Book.

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