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# The Effect of Listening Quran on Reducing Stress Moderated by Gender

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**Abstract**

The population of people experiencing stress is increasing. On the other hand, Indonesian society has several religious practices that can reduce stress, one of which is listening to the Quran. Several studies on the effects of listening to the Quran on stress have been carried out, but none have discuss about the gender aspect. In fact, these gender differences play a role in stress, religiosity, and spirituality. This research carried out an quasi experiment by dividing two groups based on gender. Both groups were treated by listening to the Quran Surah al-Insān and reading the translation. The pre-test and post-test were taken using Stress Pilot which can measure stress through tonic respiratory sinus arrhythmia (RSA). Overall, based on the results of the Wilcoxon test analysis, it is known that Z = -1.1722 and p-value = 0.138. which shows that the reduction in stress is not significant. When the two groups were analyzed separately, very different results were seen. In the male group, treatment actually caused a significant increase in stress (p= 0.034; η2=0.913). Meanwhile, in the female group, treatment caused a significant reduction in stress (p=0.014; η2=0.8250). Different gain scores of the two groups significantly different (p= 0.005; η2=0.808). This result may be explained by other findings that there are differences in solemnity between men and women (p= 0.019; η2=0.651). The higher the subject's solemnity, the sharper the level of stress reduction (r= 0.599; p= 0.034). This shows that solemnity plays a role in this research. Thus, for research and development of Islamic psychotherapy, it can be considered that gender will influence solemnity, then solemnity will help the intervention of listening to the Quran to successfully reduce stress.

Keywords: Quran, stress, gender, biopsychological

## Introduction

The population of people experiencing high stress (moderate to very severe) in Indonesia reaches 16% (Izzatika et al., 2021). In fact, for worldwide prevalence, the

population experiencing stress reaches 36.5% (Nochaiwong et al., 2021). Therefore, efforts are needed to overcome this problem. In Indonesian society with its inherent Islamic culture and values, several religious practices can be used as a therapeutic way to deal with stress (Adriani & Yustari, 2020; Rias et al., 2020; Syafitri & Rahmah, 2021; Triana & Sudjatmiko, 2021; Triwahyuni & Kadiyono, 2020). The relationship with God is an important part of Indonesian society and has been proven to be an effective way of coping with stress.

One thing can connect self with Allah contemplatively is by listening to the Quran (Tamin, 2016). Moreover, if the Quran is interpreted more deeply, then this not only provides a contemplation effect, but can also be a process of self-purification, inspire understanding about life, ease the perception of life's difficulties, and strengthen the mentality to face pressure (Bāzmūl, 2017). Several studies have found that listening to the Quran can reduce stress even in critical situations (Aziz et al., 2019), because listening to the Quran can bring comfort (Al Khansa et al., 2021; Lismayanti et al., 2021; Suwanto et al., 2016; Yunus et al., 2019), even affects the body's reactions (Nurhusna et al., 2020), and reduces stress based on EEG observations (Abdullah & Omar, 2011; Ayuni et al., 2015), and can even improve mental health (Mahjoob et al., 2016). This shows that listening to the Quran as a religious practice is an easy way to use in the therapeutic process.

Looking at all these studies, no one has anticipated extraneous variables systematically. In fact, in experimental research it is very important to consider and anticipate extraneous variables. Moreover, in researching stress, many factors influence stress such as personality (Incerti et al., 2020) and gender (Gao et al., 2020; Graves et al., 2021; Prowse et al., 2021; Redondo-Flórez et al., 2020; Strom et al., 2022).

It turns out that the benefits of religious practice cannot be separated from other factors, one of which is gender. Men and women have been found to have differences regarding religiosity (Bryukhanov & Fedotenkov, 2021) and spirituality (Mirkovic et al., 2021). Women are generally more expressive about their emotions (Shangguan et al., 2022), which could make spiritual therapy more effective for them in terms of emotional healing and self-reflection (Luna et al., 2019). Men, on the other hand, might benefit more from spiritual practices that align with cognitive or rational approaches, rather than emotional exploration (López-Madrigal et al., 2021).

The impact of this factor on the listening Quran therapy is not yet known. We assume that the spiritual healing process (listening to the Quran) will have different effects between men and women. With the findings of this research, gender variables

must be given more attention in future research, especially in experimental research involving stress variables and religious-based treatment.

## *Method*

This study employs a quasi-experimental method because it does not meet several criteria required for a true experiment (Maciejewski, 2020). Specifically: 1) The study lacks a control group that does not receive the treatment; and 2) Several important variables, such as the subject's familiarity with the selected *sūrah*, have not been controlled. The research design follows a two-group pre-test/post-test by separating groups based on gender (Brink, 2003) and allows for testing gender as a moderator variable (Milin & Hadžić, 2011). Pre-tests and post-tests are administered to assess changes between the two groups as a whole. Subsequently, separate analyses are conducted by gender. If a difference in effect is observed between the groups, it indicates that the moderator variable plays a significant role (Milin & Hadžić, 2011).

The population for this study consisted of university students from an institution in East Jakarta. A convenience sampling method was employed by open call for participation in the experiment. Ten individuals volunteered, comprising four males and six females aged 18-24 years. Age in both group were equal ($Z$= -0.543; $p$=0.293; $\eta 2$= 0.171) and baseline stress scores in both groups were equal scores ($Z$= -1.279; $p$=0.105; $\eta 2$= 0.4044) and variance ($p$=0.884). An equality test was conducted to address the issue of small sample size and to create a random sample based on scores (Bertsimas et al., 2015).

Stress Pilot is the instrument used in this study to measure stress. Conceptually, Stress in biopsychological context is defined as a response by the body that activates several symptoms (Chalmers et al., 2022). Operationally, stress is measured through respiratory sinus arrhythmia (RSA), namely the synchronization between breathing (inhale and exhale) and heart rate variability (Yasuma & Hayano, 2004). High tonic (relaxed state) RSA is related to emotional response regulation and flexibility in good coping, while low tonic RSA indicates the presence of symptoms in dealing with pressure (Fanning et al., 2020). Stress Pilot can generate stress scores based on these parameters (Balzer & Stueck, 2013).

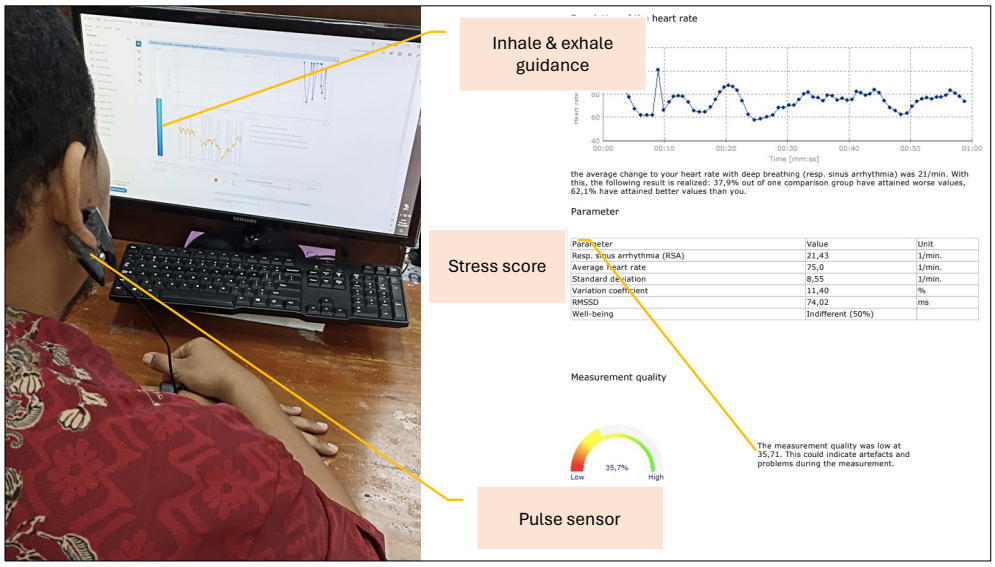



Figure 1. Example of Stress Pilot Data Collection

The solemnity scale is a self-report of a single item which was created to measure how well the respondent devote when reading of the Quran that was heard. This scale contains questions about "How much I heard the entire sūrah", "how much I read the entire translation of the sūrah", and "how much I absorbed the meaning of the sūrah". Each item uses a rating scale with a score of 1-9.

Participants were placed in an isolation room to undergo the experimental process. Before receiving treatment, participants' stress levels were measured once using the Stress Pilot. After that, they were given the treatment. Participants were asked to listen to the recitation of the Quran by ʻUmar Hishām al-ʻArabī while reading the translation of Surah al-Insān on a laptop connected to headphones. Surah al-Insān was chosen because it has been proven effective in an experiment (Salmiyati & Amizuar, 2020). After the treatment, participants' stress levels were measured again using the Stress Pilot, followed by completing the Solemnity Scale. The total time spent on this entire process was approximately 18 minutes.

One method to test the moderation effect in experimental research is simple slopes analysis (Montoya, 2019). The analysis was interpreted by examining the differences in the steepness of the line charts between the two gender groups (McCabe et al., 2018). The effect of treatment on each group is also analyzed, if the effect is different, it shows moderation (Aguinis et al., 2017). The treatment effect was seen by measuring changes in Stress Pilot scores (pre-post-test) in each group and the overall sample which was tested using the Wilcoxon Test. From the results of Wilcoxon's calculations, the Z value will be found, then this value will be converted into an effect size using the formula $Z/\sqrt{n}$ (Rosnow & Rosenthal, 2003). The most important interpretation is to

compare the effect sizes of the two groups. Because the *p*-value in non-parametric tests on small sample sizes usually does not provide much information (Kelter, 2022; Son et al., 2022). To strengthen the existence of moderation, the interaction between treatment and gender was also analyzed (Park & Yi, 2023).

## *Results*

All respondents have participated in the treatment process and data has been collected as shown in the table 1. Age, gender, solemnity score, and gain score are displayed. Gain score is the reduction value from post-test to pre-test. In other words, the gain score shows how much stress changes in each subject.

Tabel 1. Collected Data

| Name | Age | Gender | Solemnity | Pretest | Postest | Gain Score |
|---|---|---|---|---|---|---|
| A | 19 | 1 | 14 | 20.2 | 22.7 | 2.5 |
| B | 23 | 1 | 18 | 50.2 | 68.4 | 18.2 |
| C | 21 | 1 | 18 | 53.7 | 72.7 | 19 |
| D | 21 | 1 | 18 | 90.2 | 92.5 | 2.3 |
| E | 19 | 2 | 18 | 43 | 19.7 | -23.3 |
| F | 22 | 2 | 18 | 64.6 | 60.5 | -4.1 |
| G | 18 | 2 | 19 | 72.8 | 69.9 | -2.9 |
| H | 18 | 2 | 22 | 93.3 | 71.3 | -22 |
| I | 24 | 2 | 22 | 92 | 16.4 | -75.6 |
| J | 21 | 2 | 19 | 67.3 | 63.6 | -3.7 |

Note= 1= Man; 2= Woman

There was no significant difference in age between the two groups, either in mean ($p$= 0.645; $\eta 2$= 0.309) or variance ($p$= 0.189). It can be concluded that there is no age bias in this study. The next stage is to combine the two gender groups (overall sample) and test the pre-test and post-test using the Wilcoxon rank test. The results of the pre-test and post-test can be seen in the figure 2.

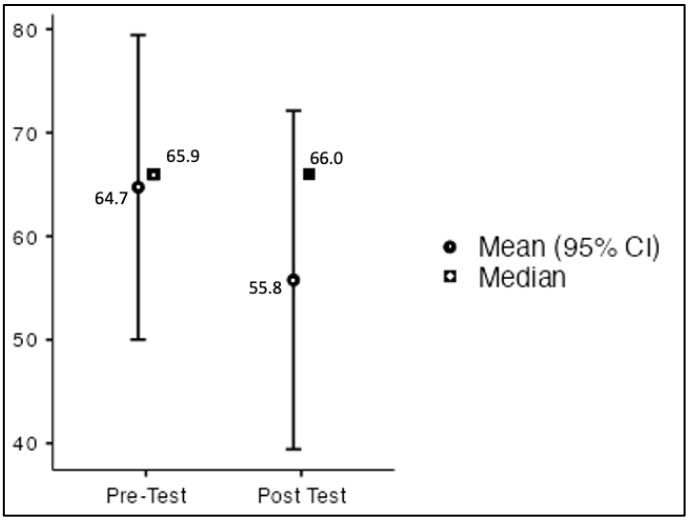



Figure 2. Pre-Post Test Overall Sample

Based on the figure 2, it can be seen that there is a tendency for the stress score to decrease in terms of the mean score (64.7 to 55.8). However, different results are shown through the median score (65.9 to 66.0). This indicates that in the post-test scores, several participants recorded high responses, meaning that many did not experience a reduction in stress. Based on the results of the Wilcoxon test analysis, it is known that $Z$ = -1.1722 and $p$-value = 0.138. Based on $p$-value, the reduction is not significant. However, based on the effect size, this decrease was in the moderate category ($r$=0.418; $\eta 2$=0.371). The different results are most visible when the graphs are separated by gender as shown on figure 3.

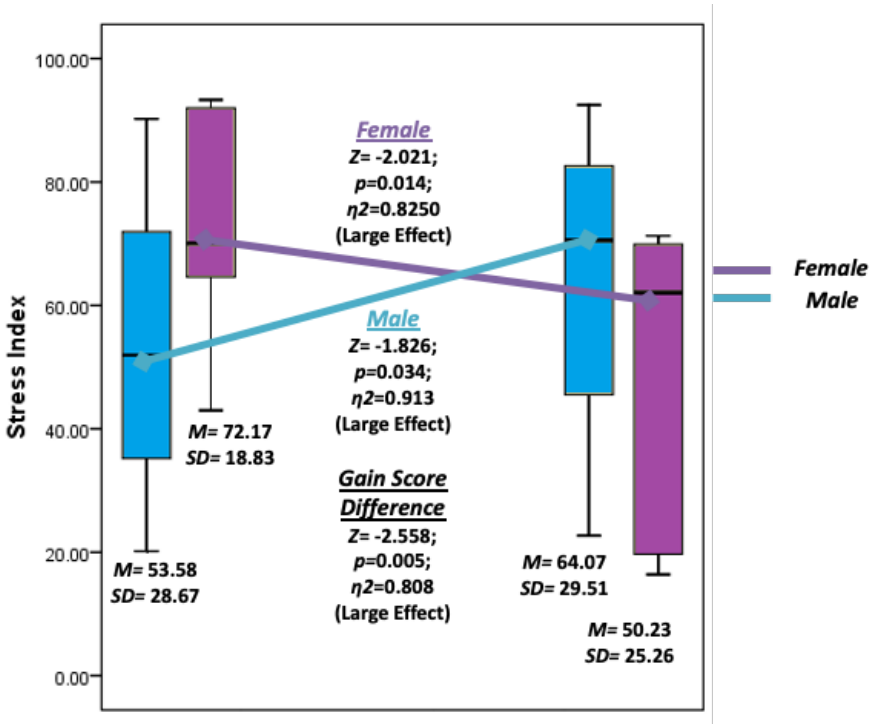



Figure 3. Pre-Post Test in Both Groups

Based on the figure 3, the results are very different from the previous results. It showed that the gender variable has an interaction effect on the treatment. In the male group, the treatment actually caused a significant increase in stress ($p$= 0.034) and had a large effect size ($\eta 2$=0.913). conversely, in the female group, treatment caused a significant reduction in stress ($p$=0.014) with a large effect ($\eta 2$=0.8250). Therefore, the gain scores of the two groups to become more contrasting and significantly different ($p$= 0.005), and has a large effect ($\eta 2$=0.808). This shows that the gender variable plays a moderator role in this experiment.

An explanation is required for why gender might influence these two experiments. Although the psychological profiles of each gender differ significantly, it is important to identify which variables are most likely to have an effect in this research. One possible reason for the differences in gender effects is that psychological states vary between men and women. Women are often considered to be more sensitive and emotionally responsive, prioritizing compassion and self-reflection, whereas men tend to prioritize cognitive aspects (Treichler et al., 2022). Thus, women may find it easier to absorb and be emotionally touched by the recitation of the Quran. We have also considered other variables that may be related to this, specifically the variable of solemnity.

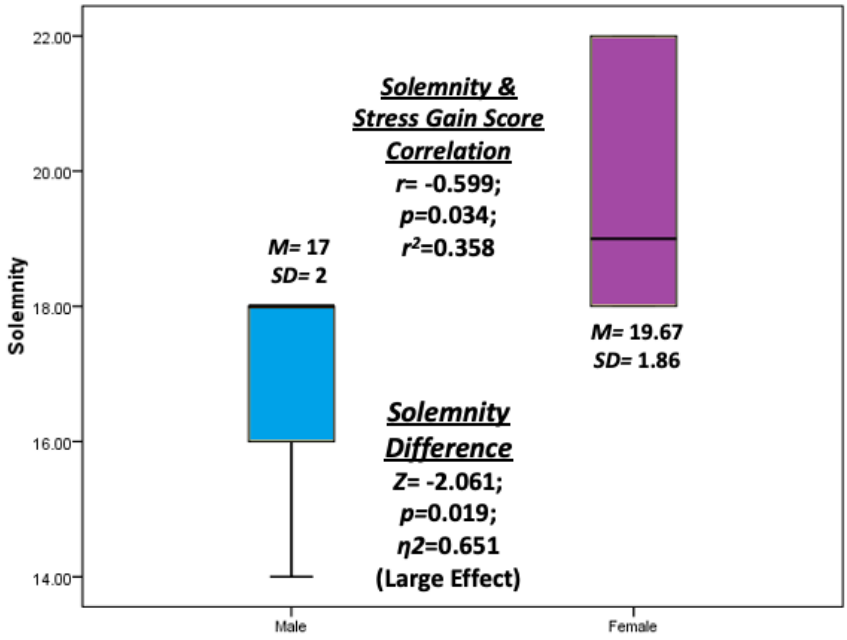



Figure 4. Differences in Solemnity between Men and Women

It was found that there was a significant difference in solemnity between men and women ($p$= 0.019). Most women have a solemnity score ($M$= 19.67) which is higher than men ($M$= 17), this difference is very visible in the box-plot above. This difference has a large effect on both groups ($\eta 2$=0.651). To determine whether solemnity is related to the experimental process, the solemnity variable was correlated with the gain score to assess whether higher levels of solemnity influence the degree of stress reduction or increase. An illustration of the correlation between solemnity and the gain score can be seen in the Figure 5.

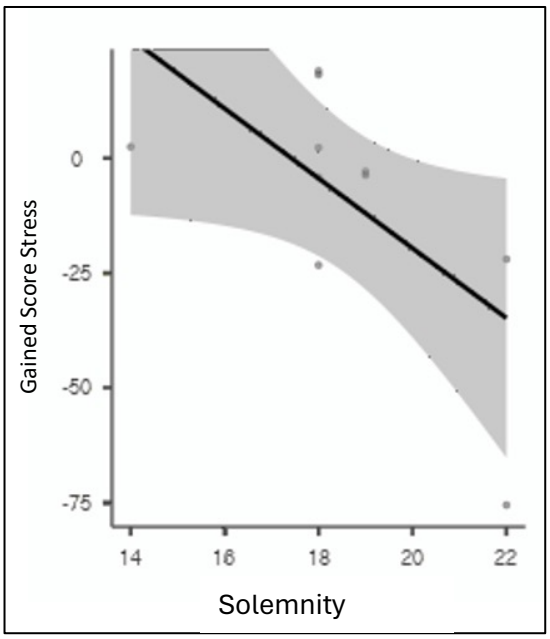



Figure 5. Correlation between Solemnity and Reduction Stress

The figure 5 shows that the higher the solemnity on the subject, the sharper the level of stress reduction becomes (r= 0.599; p= 0.034). This shows that solemnity plays a role in this research. It can be assumed that gender relate to solemnity, then solemnity will help the intervention of listening to the Quran to reduce stress.

## Discussion

Even though women are considered to have a vulnerability to psychological symptoms (Alsayyad et al., 2020; Mareta & Kirana, 2022; Thomas et al., 2022; Uljanah & Rohimi, 2021), on the other hand women have better emotional evaluations (Neumann et al., 2022) and are able to recognize emotions better (Abbruzzese et al., 2019) and are able to remember emotional experiences more strongly (Staugaard & Berntsen, 2021). Women are better at recognizing happy emotions and sad emotions (Lin et al., 2021) This may be related to achieve solemnity in hearing the Quran. So, this treatment succeeds in reducing stress effectively.

In contrast to women, men prioritize cognitive functions (Okamoto et al., 2021). Men tend to engage all of their cognitive functions when faced with verbal tasks, such as reading text. In contrast, women utilize only certain cognitive domains (Jockwitz et al., 2021). Men tend to experience reactions in the left hippocampus. However, the dynamic use of the left hippocampus, without balance from the right, can result in poor stress regulation (Goldfarb et al., 2019). This may be related to the difficulty for men to achieve solemnity. Therefore, the stimulus obtained by men from hearing the Quran is

processed holistically by cognitive, not emotional, so that solemnity is difficult to achieve and actually increases biopsychological stress reactions.

Qur'anic listening therapy is more frequently studied in terms of recitation, voice, and meaning. This appears to be sensitive to gender from a biopsychological perspective (Chen et al., 2018; Lin et al., 2021; Pang et al., 2023; Zhang et al., 2022).This is an opportunity to develop other types of qur'ānī therapeutic methods that involve more "masculinity" features, such as therapy through cognitive perspective Quran verses with tadabbur. The tadabbur method has been studied in relation to other variables (Hany, 2022; Mohd Saad et al., 2021; Noornajihan Jaafar & Sapora Sipon, 2022; Yuliani et al., 2019), but very few studies have designed tadabbur as an intervention method. A study designed tadabbur of the Quran with a contemplative approach in the form of training (Ansyah et al., 2019). In fact, tadabbur can be designed as a simple intervention, namely by rereading a verse until someone reaches an understanding of the consequences of that verse (Ibn Qayyim, 2004). Combining cognitive and emotional processes in Qur'anic therapy may potentially reduce stress more effectively.

## Conclusion

Gender plays a role in determining the effectiveness of listening to the Quran to reduce stress. Men show an increased stress response after listening to the Quran, and this is related to lower solemnity in men. In contrast, women showed reduced stress after listening to the Quran. On the other hand, women have higher solemnity than men. Higher solemnity is related to how low stress can be achieve. Thus, for research and development of Islamic psychotherapy, it can be considered that gender related to solemnity, then solemnity will help the intervention of listening to the Quran to successfully reduce stress.

Several confirmatory efforts could be undertaken to clarify the results of this study. A correlation study between solemnity in recitation Quran, gender, and stress could be conducted with a larger sample. On the other hand, There is an opportunity to develop more specific Qur'anic therapy for men, such as placing a greater emphasis on rational-cognitive process on the Qur'anic listening therapy.

## References

Abbruzzese, L., Magnani, N., Robertson, I. H., & Mancuso, M. (2019). Age and gender differences in emotion recognition. *Frontiers in Psychology*, *10*(2371). https://doi.org/10.3389/fpsyg.2019.02371

Abdullah, A. A., & Omar, Z. (2011). The effect of temporal EEG signals while listening to quran recitation. *International Journal on Advanced Science, Engineering and Information Technology*, *1*(4). https://doi.org/10.18517/ijaseit.1.4.77

Adriani, Y., & Yustari, D. (2020). Religious practices as stress management among young muslims in Indonesia. *Proceedings of the 1st International Conference on Religion and Mental Health*. https://doi.org/10.4108/eai.18-9-2019.2293455

Aguinis, H., Edwards, J. R., & Bradley, K. J. (2017). Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods*, *20*(4). https://doi.org/10.1177/1094428115627498

Al Khansa, B., Firdaus Mansoer, F. A., & Shahib, N. (2021). Systematical review: Pengaruh mendengarkan murottal Alquran terhadap penurunan kecemasan pada ibu hamil. *Jurnal Integrasi Kesehatan & Sains*, *3*(2). https://doi.org/10.29313/jiks.v3i2.7456

Alsayyad, E., Helmy, A. A., Kishk, N. A., Farghaly, M., Ragab, A. H., & El-Jaafary, S. I. (2020). Gender difference in health issues and cognitive functions among an Egyptian normal elderly population. *Egyptian Journal of Neurology, Psychiatry and Neurosurgery*, *56*(1). https://doi.org/10.1186/s41983-020-0146-z

Ayuni, S., Nasir, M., Hafizah, W. M., & Mahmud, W. (2015). Brain signal analysis using different types of music. *International Journal of Integrated Engineering*, *7*(3). https://publisher.uthm.edu.my/ojs/index.php/ijie/article/view/1226

Aziz, N. A., Ali, S., & Hassan, M. H. (2019). Effects of holy Quran listening on physiological stress response in intensive care unit patients. *International Journal of Human and Health Sciences (IJHHS)*. https://doi.org/10.31344/ijhhs.v0i0.154

Balzer, H.-U., & Stueck, M. (2013). The psychobiological meaning and measuring of hypersensibility. *Biopsychological Basics of Life*, *3*, 46–52. https://www.researchgate.net/publication/277307362_The_psychobiological_meaning_and_measuring_of_Hypersensibility

Bāzmūl, M. (2017). *Contemplation of the Qur'ān and its effect regarding purification of the soul*. Authentic Statements Publishing.

Bertsimas, D., Johnson, M., & Kallus, N. (2015). The power of optimization over randomization in designing experiments involving small samples. *Operations Research*, *63*(4). https://doi.org/10.1287/opre.2015.1361

Brink, P. J. (2003). Editorial: Two-group experimental designs. In *Western Journal of Nursing Research* (Vol. 25, Issue 6). https://doi.org/10.1177/0193945903255662

Bryukhanov, M., & Fedotenkov, I. (2021). Gender differences in religiosity: a report on Russian data. *Journal of Gender Studies*. https://doi.org/10.1080/09589236.2021.1962702

Chalmers, T., Hickey, B. A., Newton, P., Lin, C. T., Sibbritt, D., McLachlan, C. S., Clifton-Bligh, R., Morley, J., & Lal, S. (2022). Stress watch: The use of heart rate and heart rate variability to detect stress: A pilot study using smart watch wearables. *Sensors*, *22*(1). https://doi.org/10.3390/s22010151

Chen, X., Yuan, H., Zheng, T., Chang, Y., & Luo, Y. (2018). Females are more sensitive to opponent's emotional feedback: Evidence from event-related potentials. *Frontiers in Human Neuroscience*, *12*. https://doi.org/10.3389/fnhum.2018.00275

Fanning, J., Silfer, J. L., Liu, H., Gauvin, L., Heilman, K. J., Porges, S. W., & Rejeski, W. J. (2020). Relationships between respiratory sinus arrhythmia and stress in college students. *Journal of Behavioral Medicine*, *43*(2), 308–317. https://doi.org/10.1007/s10865-019-00103-7

Gao, W., Ping, S., & Liu, X. (2020). Gender differences in depression, anxiety, and stress among college students: A longitudinal study from China. *Journal of Affective Disorders*, *263*. https://doi.org/10.1016/j.jad.2019.11.121

Goldfarb, E. v., Seo, D., & Sinha, R. (2019). Sex differences in neural stress responses and correlation with subjective stress and stress regulation. *Neurobiology of Stress*, *11*. https://doi.org/10.1016/j.ynstr.2019.100177

Graves, B. S., Hall, M. E., Dias-Karch, C., Haischer, M. H., & Apter, C. (2021). Gender differences in perceived stress and coping among college students. *PLoS ONE*, *16*(8 August). https://doi.org/10.1371/journal.pone.0255634

Hany, U. (2022). Tadabbur bacaan al-Qur'an dalam mengatasi learning loss: Studi living Qur'an di SMP Integral Kumai. *Al Qalam: Jurnal Ilmiah Keagamaan Dan Kemasyarakatan*, *16*(3). https://doi.org/10.35931/aq.v16i3.964

Ibn Qayyim. (2004). *al-Fawā'id*. Dār al-Kutub al-'Ilmiyyah.

Incerti, C. C., Argento, O., Magistrale, G., di Battista, G., Ferraro, E., Caltagirone, C., Pisani, V., & Nocentini, U. (2020). Can personality traits influence occupational stress in multiple sclerosis patients? A one-year longitudinal study. *Applied Neuropsychology:Adult*, *27*(4). https://doi.org/10.1080/23279095.2018.1553045

Izzatika, M., Syakurah, R. A., & Bonita, I. (2021). Indonesia's mental health status during the Covid-19 pandemic. *Indigenous: Jurnal Ilmiah Psikologi*, *6*(2).

Jockwitz, C., Wiersch, L., Stumme, J., & Caspers, S. (2021). Cognitive profiles in older males and females. *Scientific Reports*, *11*(1). https://doi.org/10.1038/s41598-021-84134-8

Kelter, R. (2022). Power analysis and type I and type II error rates of Bayesian nonparametric two-sample tests for location-shifts based on the Bayes factor under Cauchy priors. *Computational Statistics and Data Analysis*, *165*. https://doi.org/10.1016/j.csda.2021.107326

Lin, Y., Ding, H., & Zhang, Y. (2021). Gender differences in identifying facial, prosodic, and semantic emotions show category-and channel-specific effects mediated by encoder's gender. *Journal of Speech, Language, and Hearing Research*, *64*(8). https://doi.org/10.1044/2021_JSLHR-20-00553

Lismayanti, L., Ariyanto, H., Azmi, A., Fitria Nigusyanti, A., & Ayu Andira, R. (2021). Murattal Al-Quran Therapy to Reduce Anxiety among Operating Patients. *Genius Journal*, *2*(1). https://doi.org/10.56359/gj.v2i1.14

López-Madrigal, C., de la Fuente, J., García-Manglano, J., Martínez-Vicente, J. M., Peralta-Sánchez, F. J., & Amate-Romera, J. (2021). The role of gender and age in the emotional well-being outcomes of young adults. *International Journal of Environmental Research and Public Health*, *18*(2). https://doi.org/10.3390/ijerph18020522

Luna, M. J., Ameli, R., Sinaii, N., Cheringal, J., Panahi, S., & Berger, A. (2019). Gender differences in psycho-social-spiritual healing. *Journal of Women's Health*, *28*(11). https://doi.org/10.1089/jwh.2019.7837

Maciejewski, M. L. (2020). Quasi-experimental design. *Biostatistics and Epidemiology*, *4*(1). https://doi.org/10.1080/24709360.2018.1477468

Mahjoob, M., Nejati, J., Hosseini, A., & Bakhshani, N. M. (2016). The effect of Holy Quran voice on mental health. *Journal of Religion and Health*, *55*(1). https://doi.org/10.1007/s10943-014-9821-7

Mareta, M., & Kirana, D. L. (2022). Trauma healing on domestic violence: The effectiveness of Islamic feminist counseling. *Konseling Religi: Jurnal Bimbingan Konseling Islam*, *13*(2). https://doi.org/10.21043/kr.v13i2.16784

McCabe, C. J., Kim, D. S., & King, K. M. (2018). Improving present practices in the visual display of interactions. *Advances in Methods and Practices in Psychological Science*, *1*(2). https://doi.org/10.1177/2515245917746792

Milin, P., & Hadžić, O. (2011). Moderating and mediating variables in psychological research. In *International Encyclopedia of Statistical Science*. https://doi.org/10.1007/978-3-642-04898-2_631

Mirkovic, B., Belloncle, V., Pellerin, H., Guilé, J. M., & Gérardin, P. (2021). Gender differences Related to Spirituality, Coping Skills and Risk Factors of Suicide Attempt: A Cross-Sectional Study of French Adolescent Inpatients. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.537383

Mohd Saad, M. F., Mohamad, S., Ishak, H., Hussin, H., & Zainol, N. Z. N. (2021). Implementation of tadabbur element in Quran memorisation process. *International Journal of Academic Research in Business and Social Sciences*, *11*(7). https://doi.org/10.6007/ijarbss/v11-i7/10381

Montoya, A. K. (2019). Moderation analysis in two-instance repeated measures designs: Probing methods and multiple moderator models. *Behavior Research Methods*, *51*(1). https://doi.org/10.3758/s13428-018-1088-6

Neumann, D., Mayfield, R., Sander, A. M., Jang, J. H., Bhamidipalli, S. S., & Hammond, F. M. (2022). Examination of social inferencing skills in men and women after traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, *103*(5). https://doi.org/10.1016/j.apmr.2021.10.028

Nochaiwong, S., Ruengorn, C., Thavorn, K., Hutton, B., Awiphan, R., Phosuya, C., Ruanta, Y., Wongpakaran, N., & Wongpakaran, T. (2021). Global prevalence of mental health issues among the general population during the coronavirus disease-2019 pandemic: a systematic review and meta-analysis. *Scientific Reports*, *11*(1). https://doi.org/10.1038/s41598-021-89700-8

Noornajihan Jaafar, & Sapora Sipon. (2022). Tadabbur al-Quran and its implications for mental and emotional well-being under movement control order conditions. *Revelation and Science*, *12*(1).

Nurhusna, Ekawaty, F., & Sulistiawan, A. (2020). The effect of murottal alquran therapy on heart rate, respiration rate, saturation oxygen of premature infants using mechanical ventilation in the neonatal intensive care unit. *Proceedings of the 2nd Sriwijaya International Conference of Public Health (SICPH 2019)*. https://doi.org/10.2991/ahsr.k.200612.049

Okamoto, S., Kobayashi, E., Murayama, H., Liang, J., Fukaya, T., & Shinkai, S. (2021). Decomposition of gender differences in cognitive functioning: National Survey

of the Japanese elderly. *BMC Geriatrics*, *21*(1). https://doi.org/10.1186/s12877-020-01990-1

Pang, C., Li, W., Zhou, Y., Gao, T., & Han, S. (2023). Are women more empathetic than men? Questionnaire and EEG estimations of sex/gender differences in empathic ability. *Social Cognitive and Affective Neuroscience*, *18*(1). https://doi.org/10.1093/scan/nsad008

Park, S. J., & Yi, Y. (2023). Assessing differences between simple slopes in simple slopes analysis. *Journal of Business Research*, *168*. https://doi.org/10.1016/j.jbusres.2023.114204

Prowse, R., Sherratt, F., Abizaid, A., Gabrys, R. L., Hellemans, K. G. C., Patterson, Z. R., & McQuaid, R. J. (2021). Coping with the Covid-19 pandemic: Examining gender differences in stress and mental health among university students. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.650759

Redondo-Flórez, L., Tornero-Aguilera, J. F., Ramos-Campo, D. J., & Clemente-Suárez, V. J. (2020). Gender differences in stress- and burnout-related factors of university professors. *BioMed Research International*, *2020*. https://doi.org/10.1155/2020/6687358

Rias, Y. A., Rosyad, Y. S., Chipojola, R., Wiratama, B. S., Safitri, C. I., Weng, S. F., Yang, C. Y., & Tsai, H. T. (2020). Effects of spirituality, knowledge, attitudes, and practices toward anxiety regarding covid-19 among the general population in Indonesia: A cross-sectional study. *Journal of Clinical Medicine*, *9*(12). https://doi.org/10.3390/jcm9123798

Rosnow, R. L., & Rosenthal, R. (2003). Effect sizes for experimenting psychologists. *Canadian Journal of Experimental Psychology*, *57*(3). https://doi.org/10.1037/h0087427

Salmiyati, S., & Amizuar, Y. F. (2020). The effectiveness of al-qur'an healing with audio-visual methods in reducing pain in the active phase of the first stage of labor. *International Journal of Health Science and Technology*, *1*(3). https://doi.org/10.31101/ijhst.v1i3.1202

Shangguan, C., Zhang, L., Wang, Y., Wang, W., Shan, M., & Liu, F. (2022). Expressive flexibility and mental health: The mediating role of social support and gender differences. *International Journal of Environmental Research and Public Health*, *19*(1). https://doi.org/10.3390/ijerph19010456

Son, H., Choi, H., Kim, W., Youn, B. D., & Lee, G. (2022). A comparative study of statistical validation metrics with consideration of variance to address type II errors in statistical model validation. *Structural and Multidisciplinary Optimization*, *65*(2). https://doi.org/10.1007/s00158-021-03127-3

Staugaard, S. R., & Berntsen, D. (2021). Gender differences in the experienced emotional intensity of experimentally induced memories of negative scenes. *Psychological Research*, *85*(4). https://doi.org/10.1007/s00426-020-01334-z

Strom, P. S., Strom, R. D., Sindel-Arrington, T., Rude, R. V., & Wang, C. H. (2022). Gender differences in stress of community college students. *Community College Journal of Research and Practice*, *46*(7). https://doi.org/10.1080/10668926.2021.1873872

Suwanto, S., Basri, A. H., & ... (2016). Effectiveness of classical music therapy and murrotal therapy to decrease the level of anxiety patients pre surgery operation. *Journals of Ners Community*, *7*(2). https://doi.org/https://doi.org/10.55129/jnerscommunity.v7i2.327

Syafitri, D. U., & Rahmah, L. (2021). The role of religiousity and religious coping towards seeking psychological help among college students in Semarang. *Psikis : Jurnal Psikologi Islami*, *7*(2). https://doi.org/10.19109/psikis.v7i2.8599

Tamin, D. (2016). Applying quranic contemplation in counseling. *Couns-Edu: The International Journal of Counseling and Education*, *1*(1). https://doi.org/10.23916/1-9.0016.11-i3b

Thomas, E. H. X., Rossell, S. L., & Gurvich, C. (2022). Gender differences in the correlations between childhood trauma, schizotypy and negative emotions in non-clinical individuals. *Brain Sciences*, *12*(2). https://doi.org/10.3390/brainsci12020186

Treichler, E. B. H., Palmer, B. W., Wu, T. C., Thomas, M. L., Tu, X. M., Daly, R., Lee, E. E., & Jeste, D. v. (2022). Women and men differ in relative strengths in wisdom profiles: A study of 659 adults across the lifespan. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.769294

Triana, L., & Sudjatmiko, I. G. (2021). The role of religious coping in caregiving stress. *Religions*, *12*(6). https://doi.org/10.3390/rel12060440

Triwahyuni, A., & Kadiyono, A. L. (2020). Islamic religion-focused coping method as a strategy to manage work stress. *Psikoislamika : Jurnal Psikologi Dan Psikologi Islam*, *17*(2). https://doi.org/10.18860/psikoislamika.v17i2.10484

Uljanah, F., & Rohimi, P. (2021). Implementation of Islamic counseling in the case of violence against women in households in Sambirejo Village, Gabus District, Pati District. *Konseling Religi: Jurnal Bimbingan Konseling Islam*, *12*(2). https://doi.org/10.21043/kr.v12i2.8235

Yasuma, F., & Hayano, J. I. (2004). Respiratory sinus arrhythmia: Why does the heartbeat synchronize with respiratory rhythm? *Chest*, *125*(2). https://doi.org/10.1378/chest.125.2.683

Yuliani, F., Djamal, N. N., & Endi. (2019). Pengaruh kebiasaan tadabbur al-Quran terhadap kecerdasan spiritual anggota Komunitas Tadabbur Quran. *Jurnal Psikologi Islam*, *6*(2).

Yunus, S. I., Sintanaya, R., & Septa, B. (2019). Pengaruh pemberian terapi musik instrumental dan terapi murotal al-qur'an terhadap tingkat kecemasan pada pasien perawatan gigi. *Media Kesehatan Gigi*, *18*(1).

Zhang, K., Du, X., Liu, X., Su, W., Sun, Z., Wang, M., & Du, X. (2022). Gender differences in brain response to infant emotional faces. *BMC Neuroscience*, *23*(1). https://doi.org/10.1186/s12868-022-00761-5

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