

Difference in Effects of Listening to The Al-Quran and Music on Sensibility

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Abstract / Abstrak

Sensibility is a measure that can reflect the balance of human affection. Therefore, this study aims to determine difference in the effects of listening to the Al-Quran and music on sensibility. A quasi-experimental method was used by forming 2 groups of participants, each consisting of 4 individuals. The first group listened to music, while the second listened to the Al-Quran and read the translation. Participants were placed in an isolation room to take part in the experimental process. Sensibility was then measured with Sensirec before the treatment was given. In the music treatment group, instrumental music with the title Pachelbel Major in D was played. Meanwhile, in the other group, the participants were asked to listen to the Al-Quran and read the translation of Surah al-Insān. After treatment, sensibility was measured again using Sensirec, and an attention check questionnaire was filled out. The results showed that the effects of decreasing arousal (deactivation) were stronger and more significant in the Al Quran group ($\eta^2=.833$; $p=.034$), compared to the music group ($\eta^2=.183$; $p=.183$). Low arousal positive affect showed feelings of calm, relaxation, and satisfaction. In addition, the situation could predict the well-being, mental health, and life satisfaction of the participants. Based on these results, the technique of listening to the Al-Quran could be developed as a more systematic part of Islamic psychotherapy.

Sensibilitas merupakan ukuran yang dapat mencerminkan keseimbangan afeksi manusia. Penelitian ini menginvestigasi perbedaan efek mendengarkan alquran dan mendengarkan musik terhadap sensibilitas. Desain penelitian ini adalah kuasi eksperimen dengan membentuk dua kelompok partisipan dengan masing-masing kelompok terdiri dari empat orang. Kelompok pertama adalah kelompok yang diperdengarkan musik dan kelompok kedua adalah kelompok yang diperdengarkan Alquran dan membaca terjemahannya. Partisipan ditempatkan di ruang isolasi untuk mengikuti proses eksperimen. Sebelum diberikan perlakuan, partisipan diukur sensibilitasnya dengan Sensirec. Untuk partisipan yang berada pada kelompok perlakuan musik, partisipan akan diperdengarkan musik instrumental dengan judul Pachelbel Major in D. Adapun pada kelompok mendengarkan Alquran, partisipan diminta untuk mendengarkan Alquran dan membaca terjemahan surat al-Insān. Setelah perlakuan, partisipan diukur kembali dengan menggunakan Sensirec dan mengisi kuesioner attention checking. Pengaruh penurunan arousal (deaktivasi) lebih kuat dan signifikan pada kelompok Al Quran ($\eta^2=.833$; $p=.034$), daripada kelompok musik ($\eta^2=.183$; $p=.183$). Low-arousal positive affect menunjukkan perasaan tenang, santai, dan puas. Keadaan ini dapat memprediksi well-being dan kesehatan mental, dan kepuasan hidup. Dengan demikian, mendengarkan Alquran dapat memberikan banyak manfaat. Adanya penelitian diharapkan teknik mendengarkan Alquran dapat dikembangkan menjadi bagian dari psikoterapi Islami yang lebih sistematis.

Keywords / Kata kunci

Al-Quran;
Music;
Sensibility;
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Introduction

Sensibility can reflect affective state that is very important in human psychological balance (Russell et al., 1989). Individuals who have excessively high sensibility often find it difficult to reach a relaxed state (Balzer & Stueck, 2013; Kyriakou et al., 2019; Zangróniz et al., 2017), leading to anxiety, pressure, and negative

affection (Russell, 2005). Severe anxiety conditions have also been reported to cause disorders that are more difficult to treat. In addition, these conditions are experienced by several individuals people, with 7.3% of the world's human population suffering from anxiety disorders (Baxter et al., 2013). High prevalence also occurs in Muslim countries (al Omari et al.,

2020) due to their cultural capital. Despite the prevalence, no treatment model or intervention has been developed and rigorously tested (Abu-Raiya & Pargament, 2011), with the majorly only being limited to the experimental level.

In recent years, spirituality (theocentric) has been widely used in the context of psychotherapy. However, only a few studies have assessed the effects of spiritual psychotherapy on human biopsychology. Several Islamic psychospiritual therapies have been used in Muslim communities and have shown effective results (Darvishi et al., 2020; Jafari et al., 2013; Mahdavi et al., 2017; Seghatoleslam et al., 2015). This suggests that spiritual therapies may have the potential to affect the biopsychological level. In addition, an effective approach with a biopsychological effect is psychological intervention by listening to the Al-Quran. A previous study found that listening to the Al-Quran can reduce anxiety (Al Khansa et al., 2021; Lismayanti et al., 2021; Suwanto et al., 2016; Yunus et al., 2019), affect the respiratory rate, heart rate, and oxygen saturation (Nurhusna et al., 2020), and increase relaxation based on EEG observations (Abdullah & Omar, 2011).

According to previous studies, a good indication of affection can be observed through the measured sensibility of shell electron activity (Fernández-Aguilar et al., 2019; Park et al., 2009; Rathkolb & Gallei, 1993; Sorgatz & Dannel, 1978). The relaxation response that occurs in the skin has been described in various studies (Hosoi, 2006). Therefore, arousal and skin conditions have been reported to be interconnected (Fukudo, 2013). The electrical potential in the tissue (Boucsein, 1992) is related to stress or relaxation because the neurophysiological response as a background of nonspecific electrodermal activity is a suitable indicator for an anxious or relaxed state (Boucsein, 1992). The current study used a skin sensitivity approach which is defined as relaxation due to listening to the AL-Quran or music.

Listening to the Al-Quran and music were compared in the present study because there were difference and similarities in their effects in the psychological intervention process. Music is considered to have the ability to affect emotions and affection effectively (Blasco-Magraner et al., 2023; Chang et al., 2021; van Goethem & Sloboda, 2011). Meanwhile, the Al-Quran provides a chanting effect similar to music and is often used as auditory therapy. Despite the similarity, the Al-Quran has a slightly different effect, where it can increase attention and

relaxation, which is not found in music (Ayuni et al., 2015). A previous study tested the effectiveness of listening to the Al-Quran in *tartil* without musical notes on mental health and found significant results (Mahjoob et al., 2016).

In line with the results, there is a need to develop the Al-Quran as a psychotherapy approach, rather than listening therapy. This shows that the meaning of the verses heard must be tested for their effectiveness by providing translation. Therefore, this study aims to compare the effects of listening to the Al-Quran music on sensibility.

Method

This study used a quasi-experimental method as it did not meet several criteria to be considered an accurate experiment (Maciejewski, 2020). This condition was caused by various reasons, including 1) this study did not include a control group of those who did not receive treatment and 2) several important variables had not been controlled, such as the participant's familiarity with the selected music or letters.

Participants

The population was students at a university in East Jakarta. Sampling was conducted conveniently, such as making an open announcement to participate in this experiment. 10 participants were willing to take part and in the process, 2 withdrew before data collection. Therefore, 8 participants were formed into 2 groups which were randomly divided with 2 females separated into different groups. The first group of 4 individuals played music while the second group of 4 individuals listened to the Al-Quran and read the translation. The groups were confirmed to have similar variances both in terms of age and basic scores after carrying out different tests on these variables. Consequently, the results were free from the effects of gender and baseline.

Instrument

Before treatment, participants' biopsychological relaxation was measured through a score shown on a wrist-worn sensor called Sensirec (Balzer & Stueck, 2013). This was a tool used to measure biopsychological sensitivity by detecting electrodermal activity through the skin on the wrist. Measurement began by pressing the start button and taking measurements for 5 minutes, the score was then shown on the screen. A score below -200 showed hyposensitivity and a value above +200 showed hypersensitivity. Scores between -200 to +200 showed normal sensitivity.

Consequently, a score closer to 0 means more normosensitive. Hyposensitivity showed a tendency to a state of fatigue and low tension, and in a state of positive effect, it could be interpreted as a state of relaxation. Hypersensitivity showed a state of high stress or tension and positive affection, it was interpreted as a state of alertness or attention. Normosensitive showed a state of balance (Balzer & Stueck, 2013).

Another instrument used to check attention was a questionnaire that asked "How much do you listen to music", "How much do you listen to the Al- Quran being read", and "How much do you read the translation of the reading". All questions were filled with answers 1= Did not listen at all, 2= Listened a little, 3= Listened halfway, 4= Listened the most; 5= Listen completely. This questionnaire aimed to find out when participants were following the complete treatment.

Procedure

Participants were placed in an isolated room to take part in the experimental process. Before treatment, their sensitivity was measured with Sensirec once, and was given treatment afterward. Participants in the music treatment group played instrumental music with the title Pachelbel Major in D. This title was chosen because it had been proven to be effective in increasing relaxation and reducing anxiety (Knight & Rickard, 2001; Parada-Cabaleiro et al., 2021). Meanwhile, in the second group, participants were asked to listen to the Al-Quran read by 'Umar Hishām al-'Arabī while reading the translation of Surah al-Insān through a laptop connected to headphones in their ears. Surah al-Insān was used because it was proven effective in experiments (Salmiyati & Amizuar, 2020). After treatment, participants were measured again using Sensirec once again, then filled in the attention check questionnaire. The duration of time spent following this entire process in the group playing music was approximately 17 minutes and in the group playing the Al-Quran was 18 minutes. Table 1 provided details of treatment in both groups.

The duration of the 2 groups differed by 51 seconds. However, this difference could not be manipulated into the same duration, because the duration between the recording of the Al-Quran letter and music title followed the same as the original recording. Both treatments fell into the same long-duration category, the first study used a maximum musical stimulus of up to 7 minutes 50 seconds (Liljeström, 2011) and a maximum Al-

Quran stimulus of approximately 10 minutes (Eid Aburuz et al., 2023).

The activities of the groups were also different, the group that intervened with music only listened, while the group that listened to the Al-Quran was accompanied by reading the translation. This was based on the assumption that the therapeutic power of the Al-Quran was in its message (Hasan et al., 2021; Nayef & Wahab, 2018; Rozali et al., 2013; Umarella et al., 2020), while music lied in harmony with the sound (Sumakul et al., 2020).

Data analysis

Changes in sensor scores in each group were tested using the Wilcoxon test. The most crucial interpretation was to compare effect sizes of the two groups because the p-value in non-parametric tests on small sample sizes did not usually provide more information. Furthermore, the two treatments were predicted to have the same effect, so the most important procedure was to compare effects. Graphical interpretation was needed to observe more contrasting difference between the 2 groups.

Results

A total of 8 participants were involved in this study and were divided into 2 groups. Several criteria need to be considered to ensure that there was no bias in the groups, namely age bias and baseline scores.



Figure 1. Sensirec

Table 1
Treatment Details

	Music	Al-Quran
Title	Pachelbel Major in D	Surah al-Insan
Activity	Listening	Listening and Reading Translation.
Duration	06.16	07.07
Equipment	Earphone	Earphone
Attention Checking	Questionnaire	Questionnaire
Place	Isolation room.	Isolation room.

Table 2
Baselines

Music				Al-Quran			
Participant	Gender	Age	Sensibility	Participant	Gender	Age	Sensibility
SS	Female	21	-102	PQ	Female	26	-4
T	Female	23	-44	TZ	Female	21	-88
RR	Female	21	-113	ID	Female	25	-93
Z	Male	21	-47	T	Male	21	-42
Average	-	21.5	-76.5	Average	-	23.25	-56.75

Table 3
Pre-Test and Post-Test

Name	Age	Group	Time	Pretest	Postets	Gain	Gain Score
SS	21	Music	9-10 AM	-102	-6	Increase	96
T	23	Music	9-10 AM	-44	-53	Decrease	-9
RR	21	Music	9-10 AM	-113	-176	Decrease	-63
Z	21	Music	9-10 AM	-47	-65	Decrease	-18
PQ	26	AL Quran	10-11 AM	-4	-14	Decrease	-10
TZ	21	AL Quran	10-11 AM	-88	-128	Decrease	-40
ID	25	AL Quran	10-11 AM	-93	-217	Decrease	-124
T	21	AL Quran	10-11 AM	-42	-83	Decrease	-41

Embarking on an experimental study required attention to variables that could compromise the validity of the results. The first variable examined was age, as the difference between the groups showed no significant difference ($Z= -.992$; $p=.321$; $\eta^2=.351$) and only had a very low effect ($r^2=.190$). Besides, what must also be considered was the difference in baseline effect between the groups. It was found that there was no baseline difference between the two groups ($Z= -1.155$; $p= .248$; $\eta^2=.408$). From the baseline score and variance based on the Equality for Levene Test calculation, it was found that the variance was the same between the groups ($p=1.000$). Therefore, the 2 groups could be said to be homogeneous both in terms of score level and variance. For the attention-checking process, all participants were in category five (listening completely). All data obtained could be used.

The study results shown in Table 3 show that all respondents experienced a decrease in sensibility in both the group who listened to music and the Al-Quran. This shows that music and the Al-Quran have the same effect, namely reducing sensibility. To find out more clearly whether the two treatments have the same effect, it is necessary to look at the comparison graph and see how much effect the treatment has on the two groups.

Some participants who were exposed to music experienced a decrease in sensibility and some experienced an increase as shown in table 2. Therefore, the boxplot became wider (see Figure

2). When shown at the average, the decline in the sensitivity of the group that listened to music increased slightly, ranging from -76.5 to -75, as observed in the previous table.

However, SS respondents experienced a significant increase by 96 points, hence it seemed that this group had experienced an increase. When observing the graph which also extended downwards, it could be seen that several participants experienced a decrease in sensibility. Also, when analyzed statistically, changes in sensibility in the group exposed to music only experienced a low and insignificant effect ($\eta^2 = .033$; $p = .375$).

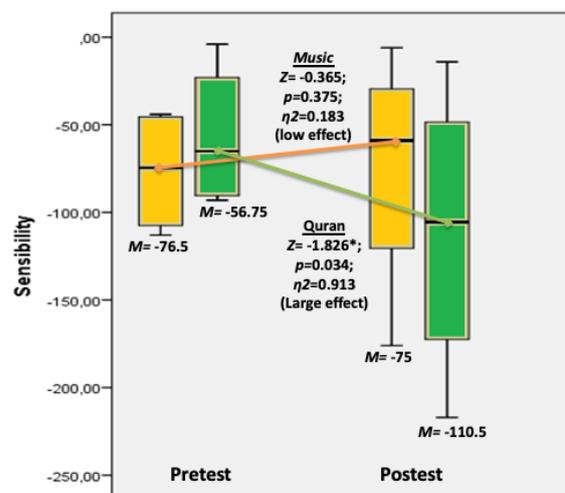


Figure 2. Comparison of effects of music (yellow) and the Al-Quran (green)

The participants treated by listening to the Al-Quran experienced a decrease in sensibility from an average of -56.75 to -110.5. This was a drastic decrease when seen from the average. Therefore, when observed statistically, the decrease in sensibility in this group was high and significant ($\eta^2 = .913$; $p = .034$). Compared to the group treated by listening to music, these groups were more consistent with each other in terms of decreasing sensibility by a high amount with an average gain score of -53.75. This figure was different from the group who listened to music with a score of 1.5. Subsequently, table 3 showed the study results when combined with the post-test.

Discussions

All participants experienced a decrease in sensibility (deactivation), except one who experienced an increase in sensibility (activation). Consequently, there was a decrease in passion, both in the Al-Quran group and the music group. Effect of decreasing arousal (deactivation) was stronger and more significant in the Al Quran group ($\eta^2 = .833$; $p = .034$) when compared to the music group ($\eta^2 = .183$; $p = .183$). Low arousal and positive affection showed feelings of calmness, relaxation, and satisfaction. This situation could predict well-being and mental health, as well as life satisfaction (McManus et al., 2019). Therefore, listening to the Al-Quran provided many benefits.

A decrease in sensibility showed a decrease in tension, stress, and anxiety (Birket-Smith et al., 1993; Jensen et al., 1996; Naveteur et al., 2005; Naveteur & Baque, 1987; Strohmaier et al., 2020). The results of this study showed that listening to the Al-Quran was more effective in reducing tension compared to listening to music. This also showed that listening to the Al-Quran had high effectiveness and even had an effect at the biopsychological level.

Biopsychologically, listening to the Al-Quran was likely to affect skin conductance levels biomarkers in the human body such as cortisol, and could reduce cortisol more than music (Saleem & Saleem, 2021). Cortisol is a biomarker that was found in several parts of the body, including the skin (D'Agata et al., 2019; Ventura et al., 2017).

Listening to the Al-Quran and reciting its meaning was used to reduce tension or stress, it did not only produce passive calmness but active calmness ((Latuapo et al., 2020; Rusdi et al.,

2022). Therefore, listening to the Al-Quran had a broad effect, such as calmness (Zadry et al., 2021) and focus at work (Purnomo & Setiawan, 2020; Zureigat, 2022). More broadly, the habit of listening to the Al-Quran had an impact on emotional development (Firdaus et al., 2021) and social skills (Ilias et al., 2019).

The basic difference between the Al-Quran and instrumental music was in its meaning. Instrumental music did not provide spiritual messages, it only provided auditory singing stimulation (Ayuni et al., 2015; Parada-Cabaleiro et al., 2021; Trimble & Hesdorffer, 2017). Listening to this not only provided auditory chanting stimulation but also spiritual messages (Haider, 2016; Malek et al., 2022; Saged et al., 2020; Tamin, 2016; Yuliani et al., 2019). It could activate a person's spiritual dimensions and beliefs that were more transcendental (Yuliani et al., 2019). Meanwhile, music only activated emotional reactions (Liljeström, 2011). Listening to the Al-Quran was a therapy that could be used effectively to reduce stress (Aziz et al., 2019), anxiety (Ghiasi & Keramat, 2018), depression (Mashitah & Lenggono, 2020), improve sleep quality (Hossini et al., 2019; Maleki & Kamali, 2006) and increase psychological function (Yektakooshali et al., 2019). Al-Quran listening therapy was expected to contribute to the mental health and psychological well-being of the Muslim community (Ab Rahman et al., 2020; Abd-alrazaq et al., 2020; Che Wan Mohd Rozali et al., 2022; Jaafar, 2022).

One of the limitations of this study was the lack of variation in the measuring instruments used. It was observed that Sensirec could only measure sensibility that reflected activation (high arousal or hypersensitivity) or deactivation (low arousal or hyposensitivity) (Balzer & Stueck, 2013). Sensirec could not evaluate whether the decrease in sensibility that occurred was followed by positive affection. Instruments utilized to measure affection could provide a more accurate picture of emotional state and affection (Russell et al., 1989; Stanisławski, 2019). Consequently, affection measuring instruments could be used for further study. Another limitation was the dissimilarity of activities between the two groups, one group had the activity of reading translations of the Al-Quran, while the other group only listened to music. Future studies could include five groups, namely groups that listened to instrumental music, chanted music, the Al-Quran (murottal), translations of the Al-Quran, and those that did not receive any treatment. With these

groups, it could be seen whether affection was more affected by sound harmonization (auditory effect) or auditory messages.

Conclusion

In conclusion, listening and reading translations of the Al -Quran was effective in reducing sensitivity or increasing relaxation compared to listening to instrumental music. A spiritual approach, such as listening to the Al -Quran could be an alternative solution to reduce tension or stress. Further studies must be conducted to determine the effects of listening to the Al -Quran on low arousal of positive affect, by including a measuring tool for affection. Induction to manipulate the participants was also needed when these individuals (subject/respondent) fell into the hypo/hypersensitive category, hence analytical information could be sharpened. Furthermore, adding types of music and Al-Quran interventions also clarified the results of this study.

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