The Effect of Listening to Holy Quran Recitation on Anxiety: A Systematic Review

Abstract

Background: Among all mental health disorders in the general population, anxiety is the most frequent. Both pharmacological and non-pharmacological interventions are used to manage anxiety in various settings. There is a growing interest among researchers on religion therapy as a non-pharmacological intervention for anxiety management. Hence, due to the importance of Holy Quran in Muslims’ lives, this systematic review was performed to assess the studies that evaluated the effect of Quran recitation on anxiety in various settings. Materials and Methods: This systematic review study was performed on articles published between January 1990 and September 2017. Several online databases including SID, Iranmedex, Magiran, IranDoc, PubMed, Scopus, and Google Scholar were searched with the keywords of “Quran,” “anxiety,” “clinical trial.” The risk of bias across all included studies was assessed using the Cochrane Collaboration’s risk of bias tool. Results: Of the 973 articles found in the initial search, 28 randomized controlled trials and quasi-experiments were selected for the systematic review. In most studies, State-Trait Anxiety Inventory was used to measure participants’ anxiety. Findings of this review revealed a positive effect of listening to Holy Quran recitation in reducing anxiety in various settings. Only one study had reported that anxiety level in Holy Quran recitation group was less than that of the control group, but it was not statistically significant. Conclusions: Based on the available researches, Quran recitation can be used as a useful non-pharmacological treatment to reduce anxiety. However, methodologically strong randomized controlled trials are needed in this area.

Keywords: Anxiety, Holy Quran, Systematic review

Introduction

Among all mental health disorders in the general population, anxiety is the most frequent. According to results from population-based surveys, approximately one third of the population is affected by an anxiety disorder during their lifetime. Anxiety can be defined as a subjective feeling of tension, apprehension, nervousness, and worry accompanied by physiological arousal. It is important to manage anxiety because it is systematically associated with negative outcomes such as quality of life (QOL) impairment, functional impairment, and lower productivity. The Global Burden of Disease study 2010 (GBD 2010) estimated that anxiety disorders contributed to 26.8 million disability adjusted life years. There are several pharmacological and non-pharmacological interventions for managing anxiety in various settings. Although pharmacological interventions such as selective serotonin reuptake inhibitors (SSRIs) have been traditionally used in the treatment of anxiety, some cannot use these drugs because of side-effects or interactions and others prefer not to use any medications. Recently, a range of non-pharmacological methods, such as aromatherapy, massage therapy, relaxation techniques, and music therapy, have been implemented to reduce anxiety. The use of music as a therapeutic approach has an old history. Inscriptions in ancient Egypt, Greece, China, India, and Rome described music as a healing agent with a relaxing effect that reduces anxiety and creates relaxation. The anxiolytic effects of music interventions on patients undergoing invasive procedures, cancer patients, and those suffering from Alzheimer’s disease are confirmed in various studies. Although the use of music as a healing agent is not a new phenomenon, there has been scant research on religious music. The available studies...
Materials and Methods

In this systematic review, national and international databases including SID, Iranmedex, Magiran, IranDoc, Scopus, and PubMed were searched in September 2017. Key words and MeSH terms such as “Quran,” “anxiety,” “clinical trial,” and Boolean operators “AND” and “OR” were used for searching in English databases. Persian terms equivalent to these English terms were used for searching in national electronic databases. To ensure that no relevant articles were missed, we also searched Google Scholar using both Persian and English search terms. All documents that were published between January 1990 and September 2017 were retrieved. Randomized controlled trials and quasi-experiments met the inclusion criteria if they assessed the effect of Quran recitation on anxiety. The studies conducted on healthy participants, patients with chronic diseases, or patients undergoing an invasive procedure were included. There was no age or gender restriction. If we could not retrieve the full text format of an article, we included its abstract only when it had sufficient information. Studies that were not published as full papers, such as conference abstracts were excluded. Two steps were taken to determine the eligibility of papers according to the inclusion criteria. First, the title and abstract of the identified papers were independently screened by two reviewers. Second, full texts were obtained for all potentially relevant articles. Disagreements were resolved by discussion between reviewers. The following information/data were extracted from studies that met the inclusion criteria: author(s) and year of publication, setting, sample size, participants, study methodology, outcome measures, and key findings.

The risk of bias in each included study was assessed using the Cochrane Collaboration’s risk of bias tool. The criteria consist of selection bias, performance bias, detection bias, attrition bias, and reporting bias. Each item was classified as “low risk of bias,” “high risk of bias,” or “unclear risk of bias.” Any discrepancy between the two reviewers were resolved by a discussion.

Ethical considerations

The study was approved by the Ethics Committee of Shahroud University of Medical Sciences with the ethical code IR.SHMU.REC.1396.150.

Results

A total of 973 articles were retrieved on initial search query. After excluding 233 duplicates and 707 irrelevant articles, 33 studies remained for full-text evaluation. Of these, 5 were excluded because one of them did not assess the anxiety level and the others were abstract from conference. Finally, 28 studies (26 articles, 2 master’s theses) were considered for systematic review. The flowchart used for retrieving the included articles is shown in Figure 1.

![Figure 1: PRISMA flow diagram](image-url)
on nursing students’ anxiety before entering the clinical practice,[29] and one study on prisoners’ anxiety were conducted.[30]

Outcome measure

The State-Trait Anxiety Inventory (STAI) in 22 studies,[16-19,21-27,29,31-36,38,39,42,43] the Test Anxiety Scale (TAS) in two studies,[30,37] the Beck Anxiety Inventory (BAI) in two studies,[26,40] the Competitive State Anxiety Inventory (CSAI) in one study,[31] and the Zung Self-Rating Anxiety Scale (SAS) in one study[28] were used to assess the level of anxiety in participants [Table 1].

Anxiety before exams in students

A study performed by Ghorbani et al. demonstrated that listening to the Quran recitation significantly reduced the anxiety level in the intervention group compared with the control group.[37] The research of Qasemtabar et al. confirmed the results of study by Ghorbani et al.[30] A study by Heidari and Shahbazi showed that anxiety level in nursing and emergency medicine students was significantly lower during exams with Quran recitation than the exams without it.[27] A study by Masoumy et al. on the medical students’ test anxiety revealed that Quran recitation was significantly more effective than music sound.[11] Moreover, Ramazani et al., in a quasi-experimental study, stated that Quran recitation was effective in reducing pre-test anxiety level of medical sciences students.[36]

Anxiety in medical sciences students before entering the clinical practice

Findings of the study performed by Pour Dehkordi et al. indicated that both relaxation muscle therapy and listening to Holy Quran recitation along with reciting God’s name were effective on reducing anxiety level of nursing students before entering the clinical practice.[21]

Anxiety in athletes

Mottaqhi, et al. in their study stated that Quran recitation significantly reduced anxiety level of female university athletes.[41] Another study by Aghamohamadi et al. showed that female university athletes who listened to Quran recitation had lower anxiety level than the control group but this difference was not statistically significant.[20]

Anxiety in prisoners

Akbari et al. assessed the effect of Quran recitation on prisoners’ anxiety. They found that intervention group had significantly lower anxiety level than the control group.[37]

Anxiety during pregnancy

Study by Jabbari et al. on 168 pregnant women showed significant reduction in anxiety level of both intervention groups, one that listened to Quran recitation with translation and another that listened to Quran recitation without translation, when compared with the control group.[43]

Anxiety in first stage of labor

Sahmeddini et al. reported in their study that listening to the recitation of the Holy Quran during the active phase of labor had a positive effect in reducing anxiety.[38]

Anxiety in patients hospitalized in the intensive care units

Study conducted by Khatoon showed that listening to the recitation of the Holy Quran had a positive effect in reducing anxiety level of patients hospitalized in the cardiac care units.[23] A study performed by Najafi et al. showed that listening to Holy Quran recitation along with lavender aromatherapy was effective in reducing anxiety level of patients suffering from myocardial infarction.[18]

Anxiety before invasive procedures

In the study by Nikbakht Nasrabad et al., it was found that listening to Holy Quran recitation had a positive effect on lowering the level of anxiety among patients hospitalized for invasive procedures.[32] Tajvidi et al. found that Holy Quran recitation was effective in reducing patients’ anxiety before open heart surgery;[22] this had been confirmed by the research of Ildarabadi et al.[15] A study by Heidari and Shahbazi showed that listening to Quran was more effective in reducing anxiety before endoscopy procedure than listening to instrumental music.[26] Babaii et al. in their study found that Holy Quran recitation decreased patients’ anxiety before cardiac catheterization.[19] Mirsane et al. demonstrated that listening to Quran recitation and its translation could reduce patients’ anxiety before general surgery.[19] Atari et al. demonstrated that listening to Holy Quran recitation decreased the anxiety score of patients before anesthesia induction.[29] Another study by Shafiei et al. on patients’ anxiety before induction of general anesthesia indicated that Holy Quran recitation with translation was significantly more effective than the same without translation.[33] Results of Majidi’s study showed the positive effect of listening to Holy Quran in reducing anxiety level of patients hospitalized for angiography.[34] In another study, Babamohamadi et al. found that listening to Holy Quran recitation had a positive effect in reducing anxiety of patients undergoing hemodialysis.[42] Mirbagher Ajorpa et al. found that both Quran recitation and instrumental music significantly reduced anxiety level of patients before abdominal surgery.[17] A study by Sharafi indicated that Holy Quran recitation compared with the Arabic music had a positive effect in lowering patient’s anxiety before lithotripsy.[21] Sharifi et al. reported in their study that both Quran recitation and instrumental music reduced anxiety score of women undergoing cesarean section. However, the recitation of Holy Quran was significantly more effective.[24] Allameh et al. indicated the positive effect of Quran recitation in reducing anxiety score of women undergoing cesarean section.[28] this had been confirmed by the research of Mirbagher Ajorpa and Ranjbar.[16]
Table 1: Characteristics of included studies

<table>
<thead>
<tr>
<th>First author-publication year</th>
<th>Type of study</th>
<th>Participants</th>
<th>Interventions and comparisons</th>
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<tbody>
<tr>
<td>Heidari and Shahbazi. 2015&lt;sup&gt;27&lt;/sup&gt;</td>
<td>Quasi-experimental study</td>
<td>86 nursing and emergency medicine students, mean age 21.9 (3.5) years, 52.3% male</td>
<td>Group 1 listened to the recitation of the Holy Quran for 5 min before the midterm exams Group 2 listened to the recitation of the Holy Quran for 5 min before the end of term exams</td>
<td>Anxiety in both groups was assessed by STAI*</td>
<td>Level of anxiety in nursing and emergency medicine students was significantly lower during exams with Quran recitation compared with exams without it (p&lt;0.05)</td>
</tr>
<tr>
<td>Qasemtabar et al. 2013&lt;sup&gt;30&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>50 high school students who had before exam anxiety, mean age 17 (1) years, 50% male</td>
<td>Group 1 listened to the recitation of the Holy Quran for 5 min Group 2 received no intervention</td>
<td>Anxiety in both groups was assessed by TASS**, before the distribution of the test paper and at the end of the intervention</td>
<td>Level of anxiety was significantly lower in the intervention group compared to the control group (p=0.001).</td>
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<tr>
<td>Masoumy et al. 2013&lt;sup&gt;31&lt;/sup&gt;</td>
<td>Quasi-experimental study</td>
<td>60 pre-medical students, mean age 19.5 (1.6) years, 70% female</td>
<td>Group 1 listened to Holy Quran recitation, before the exam for 15 min with a speaker Group 2 listened to the instrumental music via the same way</td>
<td>Anxiety in both groups was assessed by STAI before and after intervention</td>
<td>There was a significant reduction in level of anxiety for both experimental groups (p&lt;0.05). However Quran sound was more effective (p&lt;0.05).</td>
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<tr>
<td>Ramazani et al. 2014&lt;sup&gt;36&lt;/sup&gt;</td>
<td>Quasi-experimental study</td>
<td>150 medical sciences' students, 21.2 (2.2) years, 63.3% female</td>
<td>All participants listened to the recitation of the Holy Quran for 10 min before the exam</td>
<td>Anxiety was assessed by STAI before and after intervention</td>
<td>There was a significant difference in the mean score of anxiety before and after the intervention (p&lt;0.05).</td>
</tr>
<tr>
<td>Ghorbani et al. 2011&lt;sup&gt;37&lt;/sup&gt;</td>
<td>Quasi-experimental study</td>
<td>62 secondary school students, aged between 13 and 15 years</td>
<td>Group 1 listened to the recitation of the Holy Quran for 20 min before the exam Group 2 sat for 20 min in their place</td>
<td>Anxiety in both groups was assessed by TAS, pre-exam and at the end of the intervention</td>
<td>Level of anxiety was significantly lower in the intervention group compared to the control group (p&lt;0.05)</td>
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<tr>
<td>Aghamohamadi et al. 2014&lt;sup&gt;38&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>24 young female university athletes, mean age 21.8 (2.1) years</td>
<td>Group 1 heard the recitation of the Holy Quran Group 2 received no intervention</td>
<td>Anxiety in both groups was assessed by BAI*** before and after Bruce treadmill test</td>
<td>The experimental group had lower anxiety level than the control group but it was not statistically significant (p&gt;0.05).</td>
</tr>
<tr>
<td>Mottaghi et al. 2011&lt;sup&gt;41&lt;/sup&gt;</td>
<td>Quasi-experimental study</td>
<td>80 female university athletes, mean age 21.3 (2.2) years</td>
<td>Group 1 listened to the recitation of the Holy Quran for 15 min, 1 h before competition Group 2 received no intervention</td>
<td>Anxiety in both groups was assessed by CSAI**** 1 day and 15 min before the competition</td>
<td>There was a significant difference in mean anxiety score between the two groups (p&lt;0.02).</td>
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<tr>
<td>Pour Dehkordi et al. 2009&lt;sup&gt;29&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>60 nursing students, 85% female</td>
<td>Group 1 performed progressive muscle relaxation 3 times a day for 2 week Group 2 listened to Holy Quran recitation and recited God’s name every day for 2 weeks, each time for 10 min Group 3 received no intervention</td>
<td>Anxiety in all groups was assessed by STAI 2 weeks before and in day of entering to the training</td>
<td>Level of anxiety was significantly lower in the intervention groups compared to the control group (p&lt;0.05)</td>
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<tbody>
<tr>
<td>Akbari et al. 2011[40]</td>
<td>Quasi-experimental study</td>
<td>30 male prisoners, aged between 18 and 56 years</td>
<td>Group 1 listened to the recitation of the Holy Quran in 15×45 min sessions</td>
<td>Anxiety in both groups was assessed by BAI before and after intervention</td>
<td>There was a significant difference in mean anxiety score between the two groups (p=0.001)</td>
</tr>
<tr>
<td>Jabbari et al. 2017[45]</td>
<td>Clinical trial study</td>
<td>168 pregnant women referred to health centers, aged between 15 and 45 years</td>
<td>Group 1 listened to the Holy Quran recitation with translation for 20 min in health center, each time for 20 min, they also listened to CDs once a day on days non-referring to the center; Group 2 listened to the Holy Quran recitation without translation via the same way; Group 3 received no intervention</td>
<td>Anxiety was assessed by STAI before intervention and 4-8 weeks after intervention</td>
<td>In both intervention groups, 4 and 8 weeks after intervention, there was a significant decrease in the scores of STAI, in comparison with the baseline scores (p=0.001); however, in the control group no significant decrease was observed (p&gt;0.05).</td>
</tr>
<tr>
<td>Sahmeddini et al. 2014[38]</td>
<td>Clinical trial study</td>
<td>60 pregnant women who had vaginal delivery, aged between 18 and 35 years</td>
<td>Group 1 listened to the Quran recitation for 45 min using headphone during the active phase of labor; In group 2 no audio was played through the headphone</td>
<td>Anxiety in both groups was measured by STAI before and after intervention</td>
<td>There was a significant difference in mean anxiety score between the two groups (p&lt;0.001)</td>
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<tr>
<td>Khatoooni. 1997[23]</td>
<td>Quasi-experimental study</td>
<td>60 patients hospitalized in cardiac care units</td>
<td>Group 1 listened to the recitation of the Holy Quran for 20 min; Group 2 received no intervention</td>
<td>Anxiety in two groups was assessed by STAI before and after intervention</td>
<td>In intervention group there was a significant decrease in anxiety score, in comparison with the baseline score (p&lt;0.001).</td>
</tr>
<tr>
<td>Najafi et al. 2014[18]</td>
<td>Experimental study</td>
<td>70 patients with myocardial infarction, mean age 61 (12) years, 65.1% male</td>
<td>Group 1 received lavender aroma and Quran recitation four times each day for 2 days; Group 2 received no intervention</td>
<td>Anxiety in both groups was measured by STAI at the beginning and at the end of each intervention cycle</td>
<td>Level of anxiety at the end of each intervention cycle was significantly lower in the experimental group compared with the control group (p&lt;0.05)</td>
</tr>
<tr>
<td>Nikbakht Nasrabadi et al. 1998[32]</td>
<td>Quasi-experimental study</td>
<td>80 patients waiting for an invasive procedure</td>
<td>Group 1 listened to the recitation of the Holy Quran for 20 min; Group 2 received no intervention</td>
<td>Anxiety in two groups was assessed by STAI before and after intervention</td>
<td>In intervention groups there was a significant reduction in the score of anxiety, in comparison to the baseline score (p&lt;0.01)</td>
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</table>
| Heidari and Shahbazi. 2013[26] | Clinical trial study   | 60 patients who referred to a private digestive clinic, mean age 40 (1.5) years, 68.3% male | Group 1 listened to the recitation of the Holy Quran for 20 min  
Group 2 listened to the instrumental music for 20 min  
Group 3 received no intervention | Anxiety in all groups was assessed by STAI before and after intervention | Anxiety level decreased in patients in both groups of Quran ($p=0.001$) and music ($p=0.03$) compared to the control group. Also anxiety level was significantly lower in Quran group compared to the music group |
| Tajvidi et al. 2001[22]       | Quasi-experimental study | 80 patients waiting for open heart surgery         | Group 1 listened to the recitation of the Holy Quran in one day before surgery for 15 × 2 min  
Group 2 received no intervention | Anxiety in two groups was assessed by STAI before and after intervention | There was a significant difference in mean anxiety score between the two groups ($p<0.05$) |
| Ildarabadi et al. 2004[35]   | Quasi-experimental study | 61 patients waiting for open heart surgery         | Group 1 listened to the recitation of the Holy Quran in one day before surgery for 15 × 2 min  
Group 2 received no intervention | Anxiety in two groups was assessed by STAI before and after intervention | Level of anxiety was significantly lower in the intervention group compared to the control group ($p<0.001$) |
| Majidi. 2004[34]              | Clinical trial study   | 108 patients waiting for coronary artery angiography | Group 1 listened to the recitation of the Holy Quran for 20 min  
Group 2 received no intervention | Anxiety in both groups was assessed by STAI 1 day and 90 min before angiography | Anxiety level was significantly lower in the intervention group compared to the control group ($p<0.001$) |
| Babaii et al. 2015[39]        | Clinical trial study   | 60 patients experienced moderate to high level of anxiety before cardiac catheterization, aged more than 18 years | Group 1 listened to the recitation of the Holy Quran for 18 min  
Group 2 only rested in bed for 18 min | Anxiety in both groups was assessed by STAI before and after intervention | Intervention group had a significantly lower level of anxiety than the control group ($p<0.001$) |
| Atari et al. 2000[29]         | Experimental study     | 60 patients before induction of general anesthesia | Group 1 listened to the Quran recitation for 20 min using headphone, before surgery  
In group 2 no audio was played through the headphone | Anxiety in both groups was measured by STAI before and after intervention | Intervention group had a significantly lower anxiety score than the control group ($p=0.002$) |
| Shafiei et al. 2011[33]       | Experimental study     | 180 patients before induction of general anesthesia | Group 1 listened to the recitation of the Holy Quran without translation  
Group 2 listened to the recitation of the Holy Quran with translation  
Group 3 received no intervention | In three groups anxiety was measured by STAI before and after intervention | Anxiety score was significantly lower in group 2 compared to the control group ($p=0.019$). However, there was no significant difference between anxiety score of group 1 and control group ($p>0.05$) |

Contd...
Anxiety Inventory; *****SAS; Zung Self-Rating Anxiety Scale; **STAI; State-Trait Anxiety Inventory; ***BAI, Beck Anxiety Inventory; ****CSAI; Competitive State Anxiety Inventory; *****SAS; Zung Self-Rating Anxiety Scale

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<tr>
<td>Mirmane et al. 2016&lt;sup&gt;[19]&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>60 patients waiting for general surgery, aged between 18 and 50 years ,61.6% female</td>
<td>Group 1 listened to the recitation of the Holy Quran in one day before surgery for 30 min&lt;br&gt;Group 2 only rested in bed for 30 min</td>
<td>Anxiety in both groups was assessed by STAI before and after intervention</td>
<td>Anxiety level of experimental group significantly decreased following the intervention ($p=0.03$). However mean anxiety score in the control group did not change significantly ($p=0.05$) Level of anxiety was significantly lower in the intervention groups compared with the control group ($p=0.001$)</td>
</tr>
<tr>
<td>Mirbagher et al. 2011&lt;sup&gt;[17]&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>90 patients who were scheduled to undergo abdominal surgery, aged more than 15 years, 55.5% female</td>
<td>Group 1 listened to the recitation of the Holy Quran&lt;br&gt;Group 2 listened to the instrumental music&lt;br&gt;Both interventions were applied for 20 min, before surgery&lt;br&gt;Group 3 received no intervention</td>
<td>Anxiety was measured by STAI before and after intervention in three groups</td>
<td>Level of anxiety was significantly lower in the intervention groups compared with the control group ($p=0.001$)</td>
</tr>
<tr>
<td>Sharaf et al. 2000&lt;sup&gt;[21]&lt;/sup&gt;</td>
<td>Experimental study</td>
<td>60 patients waiting for lithotripsy</td>
<td>Group 1 listened to the recitation of the Holy Quran for 20 min through the headphone&lt;br&gt;Group 2 listened to Arabic music via the same way</td>
<td>Anxiety in two groups was assessed by STAI before and after intervention</td>
<td>Level of anxiety was significantly lower in the Quran recitation group compared with the music group ($p=0.001$)</td>
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<tr>
<td>Mirbagher et al. 2010&lt;sup&gt;[16]&lt;/sup&gt;</td>
<td>Quasi-experimental study</td>
<td>80 women undergoing cesarean section, aged between 25 and 35 years</td>
<td>Group 1 listened to the recitation of the Holy Quran for 20 min&lt;br&gt;Group 2 received no intervention</td>
<td>Anxiety in both groups was assessed by STAI before and after intervention</td>
<td>Anxiety in the experimental group was significantly lower than anxiety in the control group ($p=0.002$)</td>
</tr>
<tr>
<td>Sharifi 2012&lt;sup&gt;[24]&lt;/sup&gt;</td>
<td>Experimental study</td>
<td>45 women waiting for cesarean section, mean age 28.9 (4.7) years</td>
<td>Group 1 listened to the recitation of the Holy Quran for 20 min, 2 h before cesarean&lt;br&gt;Group 2 listened to the instrumental music via the same way&lt;br&gt;Group 3 received no intervention</td>
<td>Anxiety in all groups was assessed by STAI before and after intervention</td>
<td>Both experimental groups had significantly lower anxiety level than the control group ($p=0.001$) Also anxiety score of the Quran group was significantly lower than that of the music group ($p=0.003$)</td>
</tr>
<tr>
<td>Allameh et al. 2013&lt;sup&gt;[28]&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>64 women waiting for cesarean section, mean age 28.2 (4.8) years</td>
<td>Group 1 listened to the Quran using headphone during the cesarean section&lt;br&gt;Group 2 received no intervention</td>
<td>Anxiety in both groups was assessed by SAS before, during and 1 h after intervention</td>
<td>Anxiety score was significantly higher in control group during ($p=0.001$) and 1 h ($p=0.001$) after the surgery</td>
</tr>
<tr>
<td>Babamohamadi et al. 2015&lt;sup&gt;[43]&lt;/sup&gt;</td>
<td>Clinical trial study</td>
<td>60 patients undergoing hemodialysis, aged between 18 and 65 years , 57% male</td>
<td>Group 1 listened to the recitation of the Holy Quran three times a week for 1 month, each time for 20 min&lt;br&gt;Group 2 received no intervention</td>
<td>Anxiety in both groups was assessed by STAI at baseline before the start of a dialysis treatment and then 1 month later</td>
<td>There was a significant decrease in the level of anxiety for the participants in intervention group as compared to the control group ($p=0.001$)</td>
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</tbody>
</table>

*STAI: State-Trait Anxiety Inventory; **TAS: Test Anxiety Scale; ***BAI, Beck Anxiety Inventory; ****CSAI: Competitive State Anxiety Inventory; *****SAS; Zung Self-Rating Anxiety Scale
Risk of bias in included studies

Eight trials described randomized procedures, using random number table,[25,37] block randomization,[18,38,43] throwing coins,[17,42] or computer generation of random numbers.[26] The other trials did not describe the sequence randomization process. Only three trials were considered at low risk of bias for allocation concealment.[18,38,43] The other trials were rated “unclear,” as they did not have clear descriptions of their method of allocation concealment. All included studies failed to provide information about the blinding of participants, personnel and outcome assessors. All studies were judged to have a low risk of bias for incomplete outcome data; all studies had no participant losses, or the missing data were balanced in numbers across intervention groups. As far as we could see, all studies included were free of selective outcome reporting and other potential sources of bias. See Figure 2; “Risk of bias” graph and Figure 3 “Risk of bias” summary of included studies.

Discussion

This study aimed to systematically review studies that assessed the effect of listening to Holy Quran recitation on anxiety in various settings. Religion is an important socio-emotional resource and listening to religious music is an important part of religious life.12 One of the most wonderful aspects of miraculous Quran is the sounds of reading Holy Quran’s verses. Findings of our review revealed a positive effect of listening to Holy Quran recitation in reducing anxiety score in various settings. Only in one study that was conducted on female university athletes, anxiety level in experimental group was less than that of the control group but it was not statistically significant.20 Relatively little research has addressed the relationships between listening to religious music and physiological processes. A study by Bradshaw et al. showed that listening to religious music among elderly people was associated with a decrease in death anxiety, and positively influenced in life satisfaction, self-esteem, and a sense of control over their lives.12 During the past two decades, various studies have been carried out on therapeutic effect of Holy Quran recitation in Iran. Mahjoob et al. in their study found that Quran listening without its musical tone had a positive effect on the mental health of personnel in a medical sciences university.44 The research by Shirvani et al. showed that listening to Holy Quran recitation stabilized vital signs and increased arterial oxygen pressure of unconscious patients in ICUs.45 Keshavars et al. in their study aimed to assess the effect of Holy Quran recitation on physiological responses of premature infant found that pulse rate and respiratory rate significantly reduced in the intervention group compared to the control group.46 Ansari Jaberi et al. found that listening to Holy Quran recitation had a positive effect in reducing depression.47 Based on the results of this systematic review and other studies we can help people to decrease their anxiety by getting help from Holy Quran. Therefore, healthcare teams should consider Holy Quran recitation as an intervention, as this is an example of the holistic paradigm in health and the effects of such an intervention should be considered in a multidisciplinary and patient-centered approach. This highlights the need for education and training based on an ethical background that is very important when dealing with religiosity or spirituality.

Figure 2: Risk of bias’ graph of included studies

Figure 3: Risk of bias’ summary of included studies
This study has some limitations. We could not find any evidence assessing the effect of Holy Quran recitation on anxiety in other Islamic countries. Hence, this systematic review focused on studies that conducted in Iran. The low methodological quality and the high heterogeneity of the included studies mean that our findings must be interpreted with caution.

**Conclusion**

The current evidence indicates that listening to Holy Quran recitation is a useful non-pharmacological treatment for reducing anxiety. However, due to the limited number of studies in this area, further research is needed to obtain more accurate evidence.

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**Conflicts of interest**

Nothing to declare.

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