

The Impact of Attending Qur'an Memorization Programs on Wellbeing: A Study on Adult Females

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Abstract

This research explored the effects of Qur'an memorization centers on major aspects of intact wellbeing and cognitive capabilities. The target population included four hundred healthy adult females (those Qur'an centers in the sample were female-only institutions, per the gender-segregated practices of many Muslim communities) classified into five groups according to their Qur'an level of memorization: (1) full memorization, (2) memorized 15–29 Juz', (3) memorized 5–14 Juz', (4) memorized 1–4 Juz', and (5) minimal memorization limited to public schooling. They were instructed to complete a set of self-report scales and cognitive tests and a questionnaire on demographic information. A multivariate analysis of covariance showed an overall group difference in life satisfaction, happiness, and general reasoning, but not when examined individually with regard to statistical significance. Further analysis revealed that attendance at the Qur'anic memorization centers predicted life satisfaction more powerfully than happiness or cognitive abilities. In conclusion, these findings suggest that Qur'an memorization centers positively influence life satisfaction, while their influence on other cognitive and emotional factors may be more complicated. The current study indicates that the influence of religious practices on wellbeing should be considered and further research is required to examine the association between attendance at Qur'an memorization centers and the broad measures of cognitive functions.

INTRODUCTION

Qur'an memorization is essentially a religious practice in Islam, and it extends its impact to several life aspects. Research has highlighted its benefits on mental health (Kimiyaie et al., 2011; Rozali et al., 2022; Mahjoob et al., 2016; Saged et al., 2020; Saquib et al., 2017). Qur'an listening and recitation can contribute to reduction of anxiety and depression (Kimiyaie et al., 2011; Saquib et al., 2017). Additionally, there is evidence suggesting that these practices may enhance memory and cognitive functions in both adults (Nawaz & Jahangir, 2015; Septadina et al., 2021) and elderly individuals (Munawaroh et al., 2023; Tobing et al., 2022).

Although much of the existing literature focuses on cognitive functions (Rosdiana, 2020; Wagner & Spratt, 1987) and mental health outcomes (for a review see Hasim et al., 2023), few studies have explored how Qur'an memorization correlates with broader measures of wellbeing (Hematti et al., 2015). Additionally, previous research has primarily concentrated on children

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(Hanafi et al., 2021; Slamet, 2019; Sirin et al., 2021; Syaifulloh et al., 2022), leaving a gap in our understanding of how this practice influences adults.

Moreover, the study had only female participants because of the convenience and cultural receptiveness of female-exclusive Qur'an memorization centers, which were more accessible to study within the under-study community. A similar male exclusive inquiry was not conducted due to constraints of institutional access and feasibilities in accessing male participants, thus limiting the feasibility of recruitments and questionnaires from male participants. Future research is encouraged to examine male counterparts to ensure a more comprehensive understanding across genders.

In the current study, we aimed to investigate the effect of committing to memorization of Qur'an by attending centers for Qur'an memorization '*Tahfeez*', on key indicators of psychological wellbeing, specifically life satisfaction and happiness. Qur'an memorization centers are educational institutions attended by students in various Muslim communities, due to the significant importance that Muslims place on the care and reverence for the Qur'an. These centers focus on different aspects of Qur'an studies, such as memorization '*Tahfeez*', review, studying meanings '*Tafseer*' and reflection.

The study recruited participants who either committed to attend Qur'an memorization centers, or did not memorize more than what they learned in public school. We measured their psychological wellbeing and cognitive abilities through questionnaires and tests specifically designed for this purpose. Our aim is to clarify the positive effects of these practices in the lives of the individuals involved in these centers, contributing to a deeper understanding of the cognitive and emotional benefits of Qur'an memorization programs.

Literature Review

In relation to mental health, the effects of listening to Qur'an on patients was consistently evident in both reducing anxiety related to certain procedures (Majidipour et al., 201[^]; Mat-Nor et al., 201[^]; Gavgani et al., 2022), reducing mental health disorders (Babamohamadi et al., 2017), and improving physical health (Nejad et al., 2018; Teimourzadeh et al., 2024).

Several studies have demonstrated the calming and health-affecting effects of Qur'an recitation. For example, Zulkifli et al. (2022) and Teimourzadeh et al. (2024) realized the physiological and psychological effects of the practices within the medical settings. Zulkifli et al. (2022) compared Qur'an recitation to nature sounds and rest among surgical patients and found reduced anxiety, particularly from self-report measures. On the other hand, Teimourzadeh et al. (2024) showed improvements in health-related biomarkers, such as inflammatory markers, in hemodialysis patients who listened to Qur'an recitation over several sessions. Those studies thus highlight the degree of psychological and physiological resilience induced by Qur'anic audio engagement.

The effects of listening and reciting the Qur'an on reducing anxiety, promoting relaxation, and increasing psychological well-being have been confirmed by all studies on the topic (Renshaw & Cohen, 2014; Xiao et al., 2022; Al-Galal et al., 2016; Saleem & Saleem, 2023). Such outcomes are often attributed to focused attention, spiritual mindfulness, and emotional regulation.

Specifically, attentive listening enhances mindfulness by assisting individuals in taking their minds off daily stressors (Smith et al., 2015), while considerable pondering on Qur'anic meanings further aids in maintaining emotional equilibrium (Goldin & Gross, 2010). In this regard, these mechanisms could explain the considerable psychological effects seen in both clinical and non-clinical setups.

Qur'an memorization is cognitively demanding, involving sustained attention, strategic rehearsal, and metacognitive regulation (Alaydrus, 2019). Across multiple studies, this practice has been associated with both short-term and long-term memory gains (Tarmilia et al., 2022;

Nawaz & Jahangir, 2015), as well as broader academic achievement. For example, university students who engaged in a continuous seven-day Qur'an recitation program showed improvements in verbal memory tasks (Septadina et al., 2021), while those who began memorizing in childhood displayed not only enhanced cognitive performance but also higher levels of discipline and personal contentment (Nawaz & Jahangir, 2015). These findings suggest a cumulative cognitive and emotional benefit of sustained Qur'anic engagement.

The extent of Qur'an memorization moderates mental health benefits. Studies suggest that the more Qur'an one memorizes, the more reduction in the symptoms of anxiety and depression, sleep quality, and even physical health parameters will improve (Kimiyaee et al., 2011; Saquib et al., 2017; Rozali et al., 2022). This cumulative effect works because reciting the quotation includes consideration and spiritual pleasure in being engaged deeply with the sacred text. Hence, these findings emphasize participation and depth are important for psychological wellbeing.

As mentioned earlier, religious engagement can positively influence psychological wellbeing. Individuals who participate in regular religious activities often report higher levels of life satisfaction and happiness (Fauzi, 2022). The sense of purpose, community support and fulfilment derived from these practices are thought to be contributors to these outcomes (Badri et al., 2022; Kiaei & Reio, 2014; Medvedev & Landhuis, 2018). However, specific studies focusing on Qur'an memorization and its unique demands are limited, indicating the need to studies that focus on the effects of attending Qur'an memorization programs on key aspects of psychological wellbeing. Furthermore, social and spiritual aspects of Qur'an memorization centers may play a significant role in enhancing life satisfaction. These centers often provide a supportive community environment that gives a sense of belonging and shared purpose among participants. This social cohesion combined with the discipline to achieve the goals of memorization may contribute to a stronger sense of psychological wellbeing (Ten Kate et al., 2017). Thus, the relationship between attending Qur'an memorization centers and wellbeing is likely to be multifaceted, involving both cognitive and psychosocial aspects.

Happiness and life satisfaction are subjective measures of wellbeing that reflect an individual's overall evaluation of their quality of life (Medvedev & Landhuis, 2018). These constructs are influenced by a variety of factors including spirituality (Fauzi, 2022), community belonging (Badri et al., 2022) and purpose in life (Peterson et al., 2005). For many individuals, the sense of accomplishment derived from spiritual pursuits can significantly contribute to these aspects of wellbeing (Fauzi, 2022). Given the requirements of attending Qur'an memorization centers which demands discipline, concentration and resilience, it is plausible that individuals who engage in this practice may experience heightened levels of life satisfaction and happiness due to a sense of spiritual fulfilment and achievement (Kiaei & Reio, 2014).

Although happiness and life satisfaction are strongly correlated (Badri et al., 2022; Cohn et al., 2009; Peterson et al., 2005), happiness is a short-term emotional state which is affective and easily change, whilst life satisfaction is a cognitive more stable status based on one's judgment of life (Michalos, 2005). Given the gender-segregated structure of Qur'an memorization centers in many Muslim-majority regions, this study focused specifically on female participants. It would be interesting to capture the levels of happiness and life satisfaction in several groups of adult females attending Qur'an memorization at different levels.

Aims of the study

In this study, we focused specifically on memorization and review as they are the most common practices in Qur'an memorization centers. Memorization involves reciting the Quranic verses to memorize and then review to ensure continuous ability to recall this text. These two

processes form the core of education in these centers, and they require high concentration and memory organization.

The study aimed to examine the impact of memorization and review on the psychological and cognitive aspects of the participants. It explored the effects on positive psychological outcomes, that is happiness and life satisfaction, as well as cognitive abilities such as abstract reasoning and short-term memory capacity. It is believed that the commitment to memorizing and reviewing the Qur'an contributes to improving mental wellbeing through spiritual satisfaction (Fauzi, 2022), engaging in a purposeful activity (Peterson et al., 2005), and feeling of achievement (Diener, 2012). Memorization and review of Qur'an also enhance cognitive abilities by continuously stimulating memory and mental effort (Kelly et al., 2014).

METHODS

Participants

The minimum number of participants required for running multivariate on four dependent variables was calculated using G*power. With five groups according to memorization level, a medium effect size of 0.25, an alpha level of 0.05, and power of 0.80, the required sample size is 196, as recommended for ANOVA family tests using G*Power analysis (Faul et al., 2007).

Four hundred participants completed the self-report questionnaires, age ranges (16–60, average = 28.81 years). All participants were female, as the Qur'an memorization centers included in this study were gender-specific female-only institutions in accordance with community religious practices.

Access to male-only Qur'an memorization centers was restricted during the study period, and logistical constraints prevented a parallel male study, which is acknowledged as a limitation of the study and addressed further in the discussion.

Among them, 24 have high degrees, 272 have university degrees, 92 have high school degrees, and 12 did not finish high school. 320 participants were from the middle class, 26 were from the upper class and 54 were lower. 267 were single and 133 were married. There are levels in Qur'an memorization from high to low: (1) full memorization, (2) memorized 15–29 juz', (3) memorized 5–14 juz', (4) memorized 1–4 juz', and (5) minimal memorization limited to public schooling). The number of participants in each group was 55, 187, 39, 71, and 39, respectively, based on self-reported data during demographic intake.

Among the whole number of participants, 288 completed the Raven test (a non-verbal test of abstract reasoning using pattern completion matrices) and only 157 completed the memory test. A tool was built for administering the memory test, but it failed to record the responses of participants, hence a new tool was built in React and was re-sent to participants and hence this decrease of number of responses. When selecting participants who completed all three instruments, only 83 participants were included. Thus, a decision was taken to exclude the memory test from the main analyses of this study.

The main analyses included 233 participants who completed both self-report questionnaires and Raven, age ranges (16–60, average = 28.24 years) with the inclusion of 16–18-year-olds justified by the fact that, in many educational and religious contexts, individuals aged 16 and above are commonly treated as adults eligible for participation in independent learning and spiritual programs. Among them, 10 have high degrees, 163 have university degrees, 54 have high school degrees, and six did not finish high school. 190 participants were from the middle class, 13 were from upper class and 30 were lower. 165 were single and 68 were married. There are levels in Qur'an memorization from high to low: The final analytical sample was distributed across the five memorization levels as follows: 39 fully memorized, 112 memorized 15–29 juz', 19 memorized 5–14 juz', 38 memorized 1–4 juz', and 19 had only school-level memorization. These levels were self-reported and verified through center

enrollment records when available, and six did not mention their levels, so they were excluded from further analysis.

Participants were recruited using a convenient sampling method. Researchers visited centers for studying and memorizing Qur'an and send the questionnaires online via emails and social media. The snowball method was also used at some stages of recruitment. All participants were volunteers and were not paid for filling in the questionnaires of the study. The study received ethical approval from the Institutional Review Board (IRB) registered with the King Abdulaziz City for Science and Technology (KACST), Saudi Arabia (IRB Registration Number: HAP-01-R-059).

Instruments

Life satisfaction scale. To measure life satisfaction, we used the life satisfaction scale by (Diener, 1985; Pavot & Diener, 2008). The scale consists of five-items which assess an individual's general judgement of life satisfaction. Each item is rated on a seven-point rating scale. Higher scores indicate higher levels of life satisfaction. It was translated and validated on Arab sample by (Abdallah, 1998). We verified the validity and reliability of this scale on the current participants. All items showed significant correlations with the total score, $r > 0.7$, for all items. Cronbach's alpha shows an adequate reliability = 0.85.

The subjective Happiness scale. It was originally built by Lyubomirsky and Lepper, (1998). This scale has four items, with a seven-point rating scale. This scale was translated to Arabic by Moghnie and Kazarian (2012) and was validated on Saudi adult females by Alquwez et al. (2021), where factorial analysis showed good fit indices, and Cronbach's alpha was 0.82. In the current study, all items showed significant correlations with the total score (between 0.65 and 0.81). Cronbach's alpha is 0.71, which indicates acceptable reliability.

Raven's Progressive Matrices. This is a widely used test for abstract nonverbal reasoning, and in the context of this study, it served as a measure of general cognitive ability to explore whether Qur'an memorization is associated with enhanced reasoning performance. This version, which was validated on Arab sample by Ali (2013) includes 36 questions. The test was digitalized using Google forms and distributed electronically to participants. The participants' scores were based on the number of correctly solved matrices. Reliability of the test calculated by Coder-Richardson for the current study participants = 0.92.

Short term memory test. A test for verbal and visual short-term memory was developed via React using JavaScript, designed to assess working memory capacity as one of the cognitive abilities potentially influenced by the discipline of Qur'an memorization. The verbal memory section was based on the digit span subtest of Wechsler Adult Intelligence Scale (Malika, 1996). participants viewed a series of digits and recalled them in normal order (phase 1), and reversed order (phase 2). The series length increased across trials and failure to recall digits in two consecutive trials at the same level resulted in termination of the section. To measure visuospatial memory, a task was built based on the Corsi block task, which has been shown to capture components of visuospatial working memory with different variation of the task (Vandierendonck et al., 2004). A 3 x 3 grid appeared, with light moving between squares within one-second interval. Participants have to replicate the movement, starting with three moves and increasing gradually. The rule of termination was the same as the first two sections.

Participants could run the test on computers or touch screen devices, and their responses were recorded in real-time using a digital platform built in React (a JavaScript-based web framework). The responses were automatically saved in structured digital formats (JSON files) to ensure accurate data capture and privacy. Access to the results is restricted to researchers.

Procedures

Participants were invited to the study via email, where a research assistant provided them with the study aims and task description, a link to the self-report questionnaire and the Raven's Progressive Matrices Test. Upon completion of these tasks, the participant received a follow up email containing the link to the memory test. The research assistant monitored responses and sent reminder emails for those who had not completed all sections. Participants were instructed not to provide any personal information beyond contact method. This is to maintain privacy. When possible, the research assistant attended classes or group meetings at the university to direct participants in completing the tasks.

Data analysis

Data analysis was done on the SPSS Version 26. Prior to performing the actual analysis, all variables under study were cross-checked for normality, outliers and missing cases. Descriptive statistics were used to summarize demographic characteristics and outcome variables. A Multivariate Analysis of Covariance (MANCOVA) was performed to examine differences between the five Qur'an memorization groups in relation to life satisfaction, happiness, and cognitive ability (Raven scores), while controlling for age, education level, socioeconomic status, and marital status. Follow-up univariate ANCOVAs were conducted for each dependent variable. Additionally, multiple linear regression analyses (using the stepwise method) were used to assess the predictive power of Qur'an memorization level and demographic factors on each outcome

RESULTS AND DISCUSSION

Results

Demographic information for this sample is provided in Table 1. A Multivariate Analysis of Covariance (MANCOVA) carried out to test the effect of the attendance at Qur'an memorization centers with three variables Raven scores, life satisfaction and happiness, was divided according to five groups self-reported by the participants in accordance with applied measure of Qur'an memorized. These participants then got classified in terms of five categories of self-reported Qur'an memorization, as defined by the following: Level 1 = Complete memorization; Level 2 = 15-29 Juz; Level 3 = 5-14 Juz; Level 4 = 1-4 Juz; Level 5 = minimal memorization limited to school curriculum. Covariates included age, level of education, economic status, and marital status, thus controlling in the analysis.

Table 1. Demographic Characteristics of Participants ($n = 233$)

Variable	Category	<i>n</i>	%
Age Range	16–60 (Mean = 28.24)	233	100%
Education Level	Did not finish high school	6	2.6%
	High school	54	23.2%
	University degree	163	70.0%
	High degrees	10	4.3%
Socioeconomic Status	Lower class	30	12.9%
	Middle class	190	81.5%
	Upper class	13	5.6%
Marital Status	Single	165	70.8%
	Married	68	29.2%
Qur'an Memorization Level	Level 1: Full	39	16.7%
	Level 2: 15–29 Juz'	112	48.1%
	Level 3: 5–14 Juz'	19	8.2%
	Level 4: 1–4 Juz'	38	16.3%
	Level 5: Minimal/School only	19	8.2%

Table 2. Means and Standard Deviations (SD) of Life Satisfaction, Raven Scores, and Happiness by Memorization Level

Level of memorization	Life satisfaction		Raven scores		Happiness	
	Mean	SD	Mean	SD	Mean	SD
Level 1	22.21	9.03	31.74	5.19	19.05	6.79
Level 2	26.66	5.32	30.66	4.12	19.79	5.24
Level 3	23.16	6.37	28.89	6.13	17.47	6.92
Level 4	25.86	5.77	29.59	6.17	20.88	4.63
Level 5	27.13	4.86	30.69	4.93	22.62	3.98

Note: Level of memorization refers to Qur'anic engagement, not short-term memory test scores. SD = Standard Deviation.

The results show that the levels of Qur'an memorization have a significant effect on abstract reasoning, life satisfaction and happiness combined together, $F(12, 566) = 2.611, p = .002, \eta^2p = .046$. Three Analysis of Covariances (ANCOVAs) were performed to further examine the effect of Qur'an memorization on each of the dependent variables. While the level of memorization does not reveal significant differences in Raven scores, $F(4, 217) = 1.551, p = .189, \eta^2p = .028$. The effect of level of Qur'an memorization significantly influenced life satisfaction, $F(4, 217) = 3.39, p = .012, \eta^2p = .057$. the advanced groups showed marginally significantly higher level of life satisfaction compared to the beginners or those who are not attending Qur'an memorization programs. A significant effect of level of Qur'an memorization was also found on happiness $F(4, 217) = 3.797, p = .005, \eta^2p = .06$, but all pairwise comparisons were not significant. Post hoc analyses with Bonferroni correction for pairwise comparisons between the groups are shown in Table 3.

Table 3. Shows significance levels of post hoc analysis for analysis of variance on each of Raven matrices, life satisfaction and happiness, separately.

Groups		Raven matrices	Life satisfaction	Happiness
1 vs. 2	Mean diff	0.977	-4.428	-.699
	p	0.9	0.091	.9
2 vs. 3	Mean diff	2.529	3.946	2.306
	p	0.9	0.245	0.9
3 vs. 4	Mean diff	-1.259	-3.128	-3.396
	p	0.9	.453	0.112
4 vs. 5	Mean diff	-1.413	-1.108	-1.735
	p	0.9	.9	0.735
1 vs. 5	Mean diff	0.834	-4718	-3.524
	p	0.9	0.057	0.154

Note: Comparisons are based on memorization level categories described in Table 1.

Three separate multiple regression analyses with stepwise method were conducted to examine the relationship of each of abstract reasoning, life satisfaction and happiness as dependent variables and several predictor variables: attendance to Qur'an memorization, age, education level, socioeconomical status and social status. for abstract reasoning and happiness none of the predictors were significant in explaining these variables.

For life satisfaction, the results show a small correlation with attending Qur'an memorization centers, $r = 0.138$, while weak or non-significant correlations were observed with the other predictor variables. The stepwise regression model revealed that only attending Qur'an memorization was a significant predictor for life satisfaction, with all other predictors excluded from the final model, $F(1, 226) = 4.409, p = 0.037$, with $t(226) = 2.1, p = 0.037$. The models $r^2 = 0.019$, indicating that attending Qur'an memorization accounts for 1.9% for the

variance in life satisfaction, representing a small effect size. The unstandardized regression coefficient for attending Qur'an memorization was $B = 0.701$, $SE = 0.334$, suggesting that for each unit increase in attending Qur'an memorization life satisfaction increase by 0.701. The standardized coefficient, $\beta = 0.138$, indicates a small but positive relationship between attending Qur'an memorization and life satisfaction.

We ran a follow up multiple regression on the whole 400 participants who initially completed the self-report questionnaire. The stepwise method showed that only attending Qur'an memorization and age were significant predictors of life satisfaction, $F(2, 385) = 5.963$, $p < .001$. Attending Qur'an memorization and age predicted 3% of life satisfaction, $r^2 = .03$. For each unit increase in attending Qur'an memorization life satisfaction increased by 0.662, $B = .662$, $SE = 0.201$, $t = 2.291$, $p = 0.001$. For age, the effect was small but positive, $B = .004$, $SE = 0.002$, $t = 2.845$, $p = .005$.

Discussion

Among the important takeaways of this study is that regular attendance in Qur'an centers helps in the prediction of life satisfaction with regard to adult females, and thus, the higher the level of memorization, the greater their satisfaction level. This specific gender finding is very interesting in that female participants of Qur'an memory might gain different social, emotional, and spiritual benefits in accordance with their roles, responsibilities, and community support systems. The centers provide a space for women to pursue religious goals in a supportive and culturally appropriate environment, which may uniquely enhance their wellbeing.

Individuals experience greater wellbeing when their psychological needs for autonomy are fulfilled (Kiaei & Reio, 2014; Deci & Ryan, 2000; Steckermeier, 2021). In this study, we did not measure psychological autonomy directly; however, it is embodied in the structure of Qur'an memorization programs that demand people's effort, discipline, and self-directed goal setting. Such memorization programs provide the context in which attendees are encouraged to go through a preparatory phase of setting their own goals for learning and self-directed efforts towards achieving these objectives. This programmatic structure, introduced here, involves participants committing to reciting, revising, and perfecting their memorized portions over extended periods, often under supervision or peer encouragement.

As participants develop towards these goals, they often tend to have reported higher self-efficacy or spiritual fulfillment, both of which tend to increase satisfaction in life as a whole. For instance, mastery through dedication strengthens confidence (Huang, 2016; Bandura, 1997; Burger & Samuel, 2017), enhances purpose (Macaskill & Denovan, 2013), and reinforces life satisfaction (Peterson et al., 2005).

In addition to autonomy and confidence, continued religious engagement fosters an experience of meaning and purpose that supports life satisfaction (Steger, 2012). Qur'an memorization is a religious practice that offers a sense of higher purpose, which is associated with improved wellbeing. Attendees to Qur'an memorization centers feel they are engaged in spiritually meaningful activities that enhance their life purpose. The more advanced students in memorization programs are more likely to experience a stronger sense of spiritual accomplishment, linked to greater life satisfaction.

Another path to life satisfaction is the positive emotional and cognitive benefits associated with Qur'an memorization. Studies show that such practices enhance cognitive functioning, especially memory. Improved cognitive performance contributes to a more fulfilling and productive life, indirectly supporting greater wellbeing (Diener, 2012). Additionally, Qur'an recitation helps individuals cope with stress and adversity (Pargament, 1997), enhancing emotional resilience (Majidipour et al., 2018; Mat-Nor et al., 2019; Gavvani et al., 2022).

Qur'an memorization centers also promote social connectedness through shared goals and peer interactions. These centers foster social support and group solidarity, which are

important to overall life satisfaction (Badri et al., 2022). The study showed that Qur'an memorization level predicted life satisfaction, with a small but significant effect. A multivariate analysis revealed a significant combined impact on life satisfaction, happiness, and Raven scores, even though the separate effects were not individually significant. This suggests a multidimensional influence of memorization level on wellbeing and cognitive outcomes. It also supports the theory that happiness builds long-term resources for life satisfaction even if immediate emotional changes aren't captured quantitatively (Cohn et al., 2009).

Differences in life satisfaction across memorization levels may be due to mastery experiences, which improve self-efficacy. As individuals advance in memorization, their confidence increases, which leads to enhanced self-esteem and greater life satisfaction (Kiaei & Reio, 2014). Alternatively, the gains in life satisfaction may result more from the depth and sincerity of religious practice than from mere participation. Although community engagement and support are valuable (Badri et al., 2022), the repetitive recitation and internalization of sacred meanings may be the core source of spiritual fulfillment. This internal journey may hold greater psychological weight than external affirmations.

Contrary to expectations, there were no significant differences in abstract reasoning between groups. One possibility is that Raven's test does not align with the specific types of cognitive development fostered by Qur'an memorization (e.g., verbal fluency, sequential memory). Research suggests adults benefit more from semantic engagement, while children benefit from repeated rehearsal. Some studies even show verbal fluency increases in elderly Qur'an memorizers, but not semantic memory (Munawaroh et al., 2023). Future studies should employ broader cognitive assessments to explore this dimension further.

The overall life satisfaction benefits are likely due to a combination of spiritual purpose, emotional regulation, and social cohesion. Prior studies link religious reflection and repetition to increased contentment and inner peace (Fauzi, 2022; Ten Kate et al., 2017; Tiliouine & Belgoumidi, 2009). Qur'an memorization centers may enhance life satisfaction through both spiritual and communal mechanisms.

Finally, age was also a predictor of life satisfaction. As individuals grow older, they tend to shift away from materialism toward deeper meaning and stronger interpersonal connections (Milfont et al., 2016; Padgett et al., 2020). Older participants may gain greater satisfaction through structured religious engagement and autonomy in their memorization process (Nuccio & Stripling, 2019).

Limitation and Future Direction

While the present study presents a significant contribution to the understanding of the relationship between the participation in Qur'an memorization programs and indicators of wellbeing for adult females, it must nonetheless consider a few limitations to contextualize its findings and provide directions for further exploration. Moreover, this study was limited to female participants due to practical access and logistical reasons related to the specific cultural and institutional context. Future research should seek to include male participants to address potential gender differences and improve the generalizability of the findings.

First of all, the sample consisted solely of adult women, which may limit the generalizability of the findings to other populations, including men and people of younger or older ages. Given that gender-role expectations and religious experiences can differ markedly, the psychological and social consequences noted in this study may not directly apply to the experiences of other demographic groups.

The cultural and geographical context might have had a decisive bear on the relevance of the findings for other Muslim systems of belief and practice. Social norms, pedagogical infrastructure for religion, and cultural attitudes toward memorization may be sites of variation

between regions and may also influence the relationship between Qur'an memorization and wellbeing.

On the methodological aspects, one flaw in the use of self-report psychological wellbeing measurements is the introduction of response bias (Fuller et al., 2016; Podsakoff et al., 2019), including social desirability biases or the influence of background upon subjective perceptions of items within the questionnaire. Furthermore, as this cross-sectional study cannot make any inferences about causality between the active memorization in the Qur'an and wellbeing indicators, it is unclear from this study whether it is a situation in which life satisfaction leads one to the insights of memorization or, conversely, perhaps the insights acquired during memorization serve to enhancing life satisfaction.

Other variables that could be determined to be confounding may include baseline religiosity, mental health status, or social support outside of the context of memorization. These unmeasured constructs may exert their influence on both participation in religious activities and psychological wellbeing, indicating areas suitable for further study.

To extend the current findings, future studies would be warranted to assess the impact of Qur'an memorization programs on male participants as well as to recruit participants across a larger spectrum of ages and socioeconomic levels. Longitudinal or experimental approaches adopted in coming research would prove valuable in establishing causation (Singer & Willett, 2003; Twisk, 2019; Akinci & Sadikoglu, 2022) and tracking the dynamics over time of relatedness between memorization and wellbeing. Extending the study over various nations and religious compositions would provide opportunities for comparisons and enrich the findings' cross-cultural validity.

Lastly, qualitative approaches, including interviews or ethnographic observation, could permit richness in understanding the participants lived experiences that could illuminate the personal, emotional, and spiritual significances the subjects attach to memorization practices (Tracy, 2020). These may also lead to discovering other factors that are not easily discerned through standardized methods.

This study provides compelling evidence of the positive association between Qur'an memorization and psychological wellbeing among adult females. Future research must expand upon these findings by employing diverse methodologies and broader populations to comprehensively understand the transformative potential of Qur'an memorization across different contexts.

CONCLUSION

The findings of this study reveal significant differences in life satisfaction between females attending Qur'an memorization in several levels and those who are not. These results provide valuable insights into the impact of attending Qur'an memorization on various aspects of wellbeing, indicating that the benefits of such practice extend beyond cognitive improvement. Future studies may compare these factors in groups who either memorize Qur'an or study its meanings. The deeply reflective nature of Quranic recitation may explain positive states when engaging in this religious practice. A more comprehensive measure for cognitive abilities is required to capture the effect of Qur'an memorization on participants who are using various memorization strategies. Considering other dimensions of quality of life, including family circumstances, social relationships and physical health will give a broader image of the structural relationships between these constructs.

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AUTHOR CONTRIBUTION STATEMENT

Dr. Sumyah Alnajashi is the first, she contributed to conceptualization, data collection, writing the original draft and the study design. Dr. Mona Al Qasem contributed to conceptualization, research design, and data collection. She also played a role in conducting the literature review and provided critical feedback during the review and finalization of the draft. Dr. Kholoud Al-Mishaal contributed significantly to the study's conceptualization, research design, and data collection. Additionally, she provided valuable input during the review and finalization of the draft. Wafa Aluthman contributed extensively to data collection and the design of the study. Her efforts were instrumental in supporting the overall research process.

REFERENCES

- Abdallah, T. (1998). The satisfaction with life scale (SWLS): Psychometric properties in an Arabic-speaking sample. *International Journal of Adolescence and Youth*, 7(2), 113–119. <https://doi.org/10.1080/02673843.1998.9747816>
- Akinci, G., & Sadikoglu, E. (2022). Longitudinal designs in wellbeing research: Opportunities and challenges. *Current Psychology*, 41, 9503–9515. <https://doi.org/10.1007/s12144-021-02404-w>
- Alaydrus, R. (2019). Adolescent metacognitive knowledge during the Quran memorization process. *Journal of Islamic Studies and Culture*, 7(2), 12–25. <https://doi.org/10.15640/jisc.v7n2a3>
- Al-Galal, S. A. Y., Alshaikhli, I. F. T., & Rahman, A. W. B. A. (2016). Automatic emotion recognition based on EEG and ECG signals while listening to Quranic recitation compared with listening to music. In *2016 6th International Conference on Information and Communication Technology for the Muslim World (ICT4M)* (pp. 269–274). IEEE. <https://doi.org/10.1109/ICT4M.2016.062>
- Ali, I. A. H. (2013). *Raven's coloured progressive matrices*. The Egyptian Anglu Library.
- Alquwez, N., Cruz, J. P., Alotaibi, N. S., & Alshammari, F. (2021). Validity and reliability of the Subjective Happiness Scale Arabic version among Saudi working women. *Journal of Taibah University Medical Sciences*, 16(6), 835–842. <https://doi.org/10.1016/j.jtumed.2021.05.010>
- Babamohamadi, H., Sotodehasl, N., Koenig, H. G., Al Zaben, F., Jahani, C., & Ghorbani, R. (2017). The effect of Holy Qur'an recitation on depressive symptoms in hemodialysis patients: A randomized clinical trial. *Journal of Religion and Health*, 56, 345–354. <https://doi.org/10.1007/s10943-016-0281-0>
- Badri, M. A., Alkhaili, M., Aldhaheri, H., Yang, G., Albahar, M., & Alrashdi, A. (2022). Exploring the reciprocal relationships between happiness and life satisfaction of working adults—Evidence from Abu Dhabi. *International Journal of Environmental Research and Public Health*, 19(6), 3575. <https://doi.org/10.3390/ijerph19063575>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Burger, K., & Samuel, R. (2017). The role of perceived stress and self-efficacy in young people's life satisfaction: A longitudinal study. *Journal of Youth and Adolescence*, 46, 78–90. <https://doi.org/10.1007/s10964-016-0608-x>
- Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: Positive emotions increase life satisfaction by building resilience. *Emotion*, 9(3), 361. <https://doi.org/10.1037/a0015952>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Diener, E. (2012). New findings and future directions for subjective well-being research. *American Psychologist*, 67(8), 590. <https://doi.org/10.1037/a0029541>
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). *The Satisfaction with Life Scale*. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). GPower 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191.
- Fauzi, K. N. (2022). The role of religious aspects on life satisfaction: Case study of Muslims in Indonesia. *Journal of Economics Research and Social Sciences*, 6(2), 156–164. <https://doi.org/10.18196/jerss.v6i2.15325>
- Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, 69(8), 3192–3198. <https://doi.org/10.1016/j.jbusres.2015.12.008>
- Goldberg, B., Brintnell, E. S., & Goldberg, J. (2002). The relationship between engagement in meaningful activities and quality of life in persons disabled by mental illness. *Occupational Therapy in Mental Health*, 18(2), 17–44. https://doi.org/10.1300/J004v18n02_03
- Goldin, P. R., & Gross, J. J. (2010). Effects of mindfulness-based stress reduction (MBSR) on emotion regulation in social anxiety disorder. *Emotion*, 10(1), 83–91. <https://doi.org/10.1037/a0018441>
- Hanafi, M., Jumiarmoko, F. M., Wiyono, N., & Ardyanto, T. D. (2021). Quran memorization and early childhood development: A case-control with neuroscience approach. *Age (months)*, 60(69), 70–79. <https://doi.org/10.15562/bmj.v10i2.2265>
- Hasim, R., Samaeng, A., Dahlan, A., & Samaeng, R. (2023). Scoping review on the benefits of reciting, listening and memorising the Quran. *Environment-Behaviour Proceedings Journal*, 8(25), 37–43. <https://doi.org/10.21834/e-bpj.v8i25.4826>
- Hematti, S., Baradaran-Ghahfarokhi, M., Khajooei-Fard, R., & Mohammadi-Bertiani, Z. (2015). Spiritual well-being for increasing life expectancy in palliative radiotherapy patients: A questionnaire-based study. *Journal of Religion and Health*, 54, 1563–1572. <https://doi.org/10.1007/s10943-014-9872-9>
- Huang, C. (2016). Achievement goals and self-efficacy: A meta-analysis. *Educational Research Review*, 19, 119–137. <https://doi.org/10.1016/j.edurev.2016.07.002>
- Kelly, M. E., Loughrey, D., Lawlor, B. A., Robertson, I. H., Walsh, C., & Brennan, S. (2014). The impact of cognitive training and mental stimulation on cognitive and everyday functioning of healthy older adults: A systematic review and meta-analysis. *Ageing Research Reviews*, 15, 28–43. <https://doi.org/10.1016/j.arr.2014.02.004>
- Kiaei, Y. A., & Reio, T. G. Jr. (2014). Goal pursuit and eudaimonic well-being among university students: Metacognition as the mediator. *Behavioral Development Bulletin*, 19(4), 91. <https://doi.org/10.1037/h0101085>
- Kimiyaie, S. A., Khademiyan, H., & Farhadi, H. (2011). *Quran Memorization and its Effect on the Elements of Mental Health*. Journal of Zanzan University of Medical Sciences, 19(76), 64–73.
- Lyubomirsky, S., & Tucker, K. L. (1998). Implications of individual differences in subjective happiness for perceiving, interpreting, and thinking about life events. *Motivation and Emotion*, 22, 155–186. <https://doi.org/10.1023/A:1021396422190>
- Macaskill, A., & Denovan, A. (2013). Developing autonomous learning in first year university students using perspectives from positive psychology. *Studies in Higher Education*, 38(1), 124–142. <https://doi.org/10.1080/03075079.2011.566325>
- 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, 38–42. <https://doi.org/10.1007/s10943-014-9821-7>
- Majidipour, N., Nirouzaad, F., Madmoli, Y., Sarrafzade, S., Kalani, L., Aghababaeian, H., & Borujeni, S. H. (2018). The effect of Holy Quran recitation on the physiological responses of premature infants during phlebotomy: A randomized clinical trial. *Journal of Pediatric Perspectives*, 6(7), 7869–7881. <https://doi.org/10.22038/ijp.2017.24203.2038>
- Malika, L. K. (1996). *Wechsler Bellevue Intelligence Scale*. The Egyptian Anglu Library.
- Mat-Nor, M. B., Ibrahim, N. A., Ramly, N. F., & Abdullah, F. (2019). Physiological and psychological effects of listening to holy Quran recitation in the intensive care unit patients: A systematic review. *IJUM Medical Journal Malaysia*, 18(1). <https://doi.org/10.31436/imjm.v18i1.224>
- Medvedev, O. N., & Landhuis, C. E. (2018). Exploring constructs of well-being, happiness and quality of life. *PeerJ*, 6, e4903. <https://doi.org/10.7717/peerj.4903>

- Michalos, A. C. (2005). *Citation classics from social indicators research: The most cited articles*. Springer Science & Business Media. https://doi.org/10.1007/1-4020-3742-2_10
- Milfont, T. L., Milojev, P., & Sibley, C. G. (2016). Values stability and change in adulthood: A 3-year longitudinal study of rank-order stability and mean-level differences. *Personality and Social Psychology Bulletin*, 42(5), 572–588. <https://doi.org/10.1177/0146167216639245>
- Moghnie, L., & Kazarian, S. S. (2012). Subjective happiness of Lebanese college youth in Lebanon: Factorial structure and invariance of the Arabic Subjective Happiness Scale. *Social Indicators Research*, 109, 203–210. <https://doi.org/10.1007/s11205-011-9895-5>
- Munawaroh, S., Sukmawati, S., & Husna, S. (2023). The impact of religiosity and social support on psychological well-being among high school students who memorize the Qur'an. *Journal An-Nafs: Kajian Penelitian Psikologi*, 8(2), 214–227
- Nawaz, N., & Jahangir, S. F. (2015). *Effects of Memorizing Quran by Heart (Hifz) on Later Academic Achievement*. *Journal of Islamic Studies and Culture*, 3(1), 58–64
- Nejad, M. R. A., Nesami, M. B., Jafari, H., Nasab, N. M., & Kaheni, S. (2018). Comparing the effect of Qur'an recitation and scheduled visits on hemodynamic status and oxygen saturation of acute myocardial infarction patients. *Journal of Nursing and Midwifery Sciences*, 5(1). https://doi.org/10.4103/JNMS.JNMS_11_18
- Nuccio, A. G., & Stripling, A. M. (2019). I got this! Successful aging through the maintenance of autonomy. *Innovation in Aging*, 3(Suppl 1), S719. <https://doi.org/10.1093/geroni/igz038.2638>
- Padgett, D. K., Bond, L., Gurdak, K., & Henwood, B. F. (2020). Eliciting life priorities of older adults living in permanent supportive housing. *The Gerontologist*, 60(1), 60–68. <https://doi.org/10.1093/geront/gnz040>
- Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. Guilford Press.
- Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the Emerging Construct of Life Satisfaction. *The Journal of Positive Psychology*, 3(2), 137–152. <https://doi.org/10.1080/17439760701756946>
- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6, 25–41. <https://doi.org/10.1007/s10902-004-1278-z>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2019). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 104(5), 879–913. <https://doi.org/10.1037/apl0000366>
- Purwandari, F. D. H. (2022). Learning and memory of early childhood Tahfiz Quran: A systematic review. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(6), 5913–5922. <https://doi.org/10.31004/obsesi.v6i6.1707>
- Renshaw, T. L., & Cohen, A. S. (2014). Life satisfaction as a distinguishing indicator of college student functioning: Further validation of the two-continua model of mental health. *Social Indicators Research*, 117, 319–334. <https://doi.org/10.1007/s11205-013-0342-7>
- Rosdiana, I. M. (2020). Effects of memorizing Al-Qur'an on mathematical reasoning. *Daya Matematis: Jurnal Inovasi Pendidikan Matematika*, 8(2), 113–118. <https://doi.org/10.26858/jdm.v8i2.14143>
- Rozali, W. N. A. C. W. M., Ishak, I., Mat Ludin, A. F., Ibrahim, F. W., Abd Warif, N. M., & Che Roos, N. A. (2022). The impact of listening to, reciting, or memorizing the Quran on physical and mental health of Muslims: Evidence from systematic review. *Frontiers in Public Health*, 20220504288. <https://doi.org/10.3389/fjph.2022.1604998>
- Saged, A. A. G., Yusoff, M. Y. Z. M., Latif, F. A., Hilmi, S. M., Al-Rahmi, W. M., Al-Samman, A., Alias, N., & Zeki, A. M. (2020). Impact of Quran in treatment of the psychological disorder and spiritual illness. *Journal of Religion and Health*, 59, 1824–1837. <https://doi.org/10.1007/s10943-018-0572-8>
- Saleem, S., & Saleem, T. (2023). Efficacy of music and Quranic verses in reducing cortisol level: A stress biomarker in medical undergraduates. *Current Psychology*, 1–6. <https://doi.org/10.1007/s12144-021-01971-6>
- Saqui, N., Saqui, J., Alhadlag, A., Albakour, M. A., Aljumah, B., Sughayyir, M., Alhomidan, Z., et al. (2017). Health benefits of Quran memorization for older men. *SAGE Open Medicine*, 5, 2050312117740990. <https://doi.org/10.1177/2050312117740990>

- Septadina, I. S., Jannah, E. M., & Suryani, P. R. (2021). The effect of reciting Holy Qur'an toward short-term memory. *Jurnal Aisyah: Jurnal Ilmu Kesehatan*, 6(3), 565–568. <https://doi.org/10.30604/jika.v6i3.515>
- Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. Oxford University Press.
- Sirin, S., Metin, B., & Tarhan, N. (2021). The effect of memorizing the Quran on cognitive functions. *The Journal of Neurobehavioral Sciences*, 8(1), 22–27. https://doi.org/10.4103/jnbs.jnbs_42_20
- Slamet, S. (2019). The effect of memorizing Quran on the children cognitive intelligence. *Humanities & Social Sciences Reviews*, 7(3), 571–575. <https://doi.org/10.18510/hssr.2019.7384>
- Smith, B., Metzker, K., Waite, R., & Gerrity, P. (2015). Short-form mindfulness-based stress reduction reduces anxiety and improves health-related quality of life in an inner-city population. *Holistic Nursing Practice*, 29(2), 70–77. <https://doi.org/10.1097/HNP.0000000000000075>
- Steckermeier, L. C. (2021). The value of autonomy for the good life. An empirical investigation of autonomy and life satisfaction in Europe. *Social Indicators Research*, 154(2), 693–723. <https://doi.org/10.1007/s11205-020-02565-8>
- Steger, M. F. (2012). Making meaning in life. *Psychological Inquiry*, 23(4), 381–385. <https://doi.org/10.1080/1047840X.2012.720832>
- Syaifulloh, M. K., Hanafi, M., Ardyanto, T. D., Wiyono, N., Budianto, P., & Jumiatmoko, J. (2022). Electroencephalography (EEG) frontal alpha asymmetry index as an indicator of children's emotions in the three Quran learning methods: Visual, auditory, and memory. *Iranian Journal of Psychiatry*, 18(1), 93. <https://doi.org/10.18502/ijps.v18i1.11417>
- Tarmilia, Fadjaritha, Istiqomah, Purwandari, & Hutagalung (2022). *Learning and Memory of Early Childhood Tahfiz Quran: A Systematic Review*
- Teimourzadeh, M., Babamohamadi, H., Yarmohamadi, M., Ghorbani, R., & Koenig, H. G. (2024). The effect of the Holy Quran recitation on inflammatory markers in hemodialysis patients in Iran: A randomized clinical trial. *Journal of Religion and Health*, 1–14. <https://doi.org/10.1007/s10943-023-01989-z>
- Ten Kate, J., De Koster, W., & Van Der Waal, J. (2017). The effect of religiosity on life satisfaction in a secularized context: Assessing the relevance of believing and belonging. *Review of Religious Research*, 59(2), 135–155. <https://doi.org/10.1007/s13644-016-0282-1>
- Tiliouine, H., & Belgoumidi, A. (2009). An exploratory study of religiosity, meaning in life and subjective wellbeing in Muslim students from Algeria. *Applied Research in Quality of Life*, 4, 109–127. <https://doi.org/10.1007/s11482-009-9076-8>
- Tobing, Y. V. L., Boy, E., Mukhtasor, A. S., & Furqoni, A. (2022). The effect of reading the Qur'an on the cognitive function of the elderly. *MAGNA MEDIKA: Berkala Ilmiah Kedokteran dan Kesehatan*, 9(2), 183–189. <https://doi.org/10.26714/magnamed.9.2.2022.183-189>
- Tracy, S. J. (2020). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (2nd ed.). Wiley-Blackwell.
- Twisk, J. W. R. (2019). *Applied longitudinal data analysis for epidemiology: A practical guide* (2nd ed.). Cambridge University Press. <https://doi.org/10.1017/9781108672873>
- Vandierendonck, A., Kemps, E., Fastame, M. C., & Szmalec, A. (2004). Working memory components of the Corsi blocks task. *British Journal of Psychology*, 95(1), 57–79. <https://doi.org/10.1348/000712604322779460>
- Wagner, D. A., & Spratt, J. E. (1987). Cognitive consequences of contrasting pedagogies: The effects of Quranic preschooling in Morocco. *Child Development*, 1207–1219. <https://doi.org/10.2307/1130615>
- Xiao, P., Chen, L., Dong, X., Zhao, Z., Yu, J., Wang, D., & Li, W. (2022). Anxiety, depression, and satisfaction with life among college students in China: Nine months after initiation of the outbreak of COVID-19. *Frontiers in Psychiatry*, 12, 777190. <https://doi.org/10.3389/fpsy.2021.777190>
- Zulkifli, N. A., Zain, U. I. Z. M., Hadi, A. A., Ismail, M. N., & Aziz, K. H. (2022). Effects of listening to Quran recitation and nature sounds on preoperative anxiety among patients undergoing surgery. *Pakistan Journal of Psychological Research*, 37(2), 295–310. <https://doi.org/10.33824/PJPR.2022.37.2.18>

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