

# Beneficial effects of Surah Al Fatiha on cognitive functions of normal and PCOS afflicted females

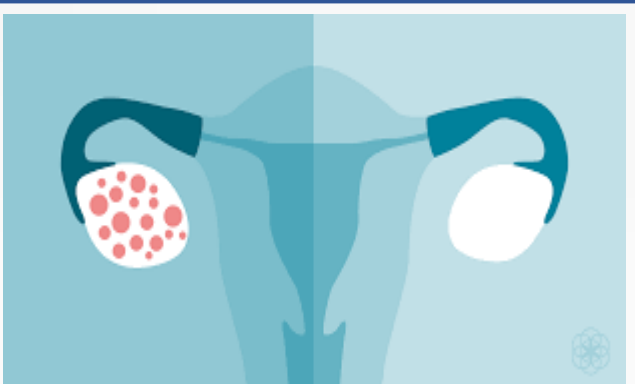


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## ABSTRACT

Polycystic ovarian syndrome (PCOS) is considered the prime reproductive disorder among females of childbearing age and can cause abnormal bleeding from the uterus, infertility, metabolic syndrome, diabetes mellitus type II, cardiorespiratory discrepancies, malignant neoplasia, depression-associated mood disorders, and sleep apnea. Numerous studies have reported the therapeutic effects of Surah Al Fatiha for many ailments. This study explored the effects of Surah Al Fatiha exposure on the cognitive functions of controls (n=7) and PCOS-afflicted (n=7) females. Study was performed at Mamji Hospital, Karachi in 2021. Paired t-tests presented significantly improved speed (p<0.001), memory (p<0.05), attention (p<0.01), flexibility (p<0.01), and problem-solving (p<0.05) in PCOS-afflicted females. Based on our findings, we conclude that listening to Surah al Fatiha improved cognition and regularized the menstrual cycle.

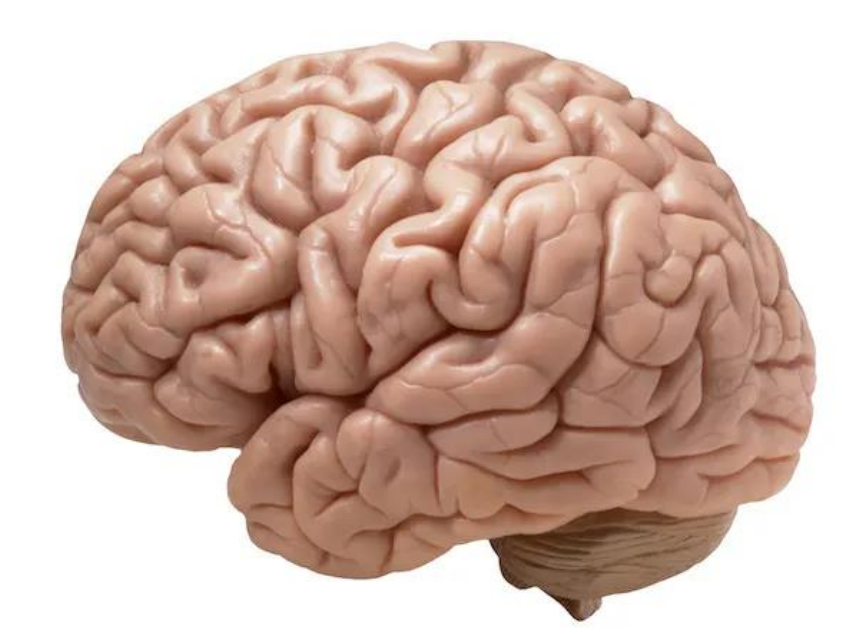


## BACKGROUND

PCOS affects 5-10% of women in the Western part of the world that belong to the fertile age. It is represented as a mixture of signs and symptoms of reproductive and endocrinal discrepancy. PCOS is deliberated as the foremost cause of infertility. It is diagnosed based on Rotterdam criteria that express two signs at a time in a female including anovulation, hyperandrogenism, and polycystic appearance on ultrasonography. Insulin resistance is a protruding feature of polycystic ovarian syndrome. Insulin resistance is reported to be the causative factor of multiple morbidities that are associated with PCOS including anovulation, obesity, infertility, impaired fasting glucose (IFG), or impaired glucose tolerance (IGT) which can result in diabetes mellitus (DM). Insulin resistance has a close association with obesity. Brain cognitive functions are the mental processes that receive and process information. Studies have reported that there is a strong relationship between hyperandrogenism, and cognitive decline accompanied by impaired memory [1, 2]. Muslims have faith in each verse of the Holy Quran, and it has hope for people in stressed mental and psychological conditions [3]. Our Prophet (PBUH) practiced dua in anxiety and stress and has also directed his followers to say dua in times of desperation. Al Fatiha surah is preferred by Muslims when somebody is sick or dies [4]. Substantial relaxation can be attained by hearing, reading, and seeing the Quranic verses. Memory training games and practices can help in enhancing brain functions and cognition, but no evidence-based studies have supported this claim [5]. Hearing and reading the Holy Quran can be an inexpensive, easily accessible, simple, and non-pharmacological technique to reduce pressure and nervousness in players [6].

## OBJECTIVE

The objective is to explore the effects of Surah Al Fatiha exposure on the cognitive functions of controls and PCOS-afflicted females.

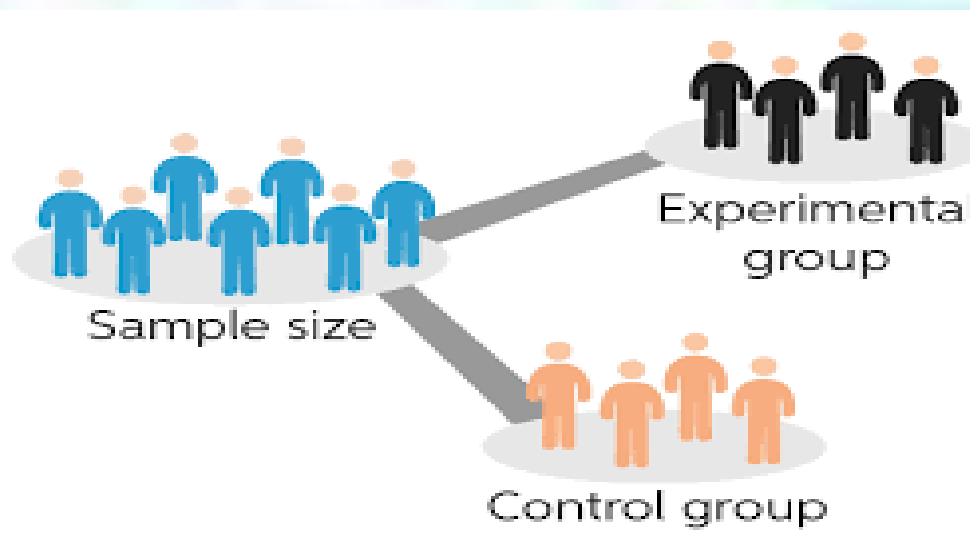


## RESULTS

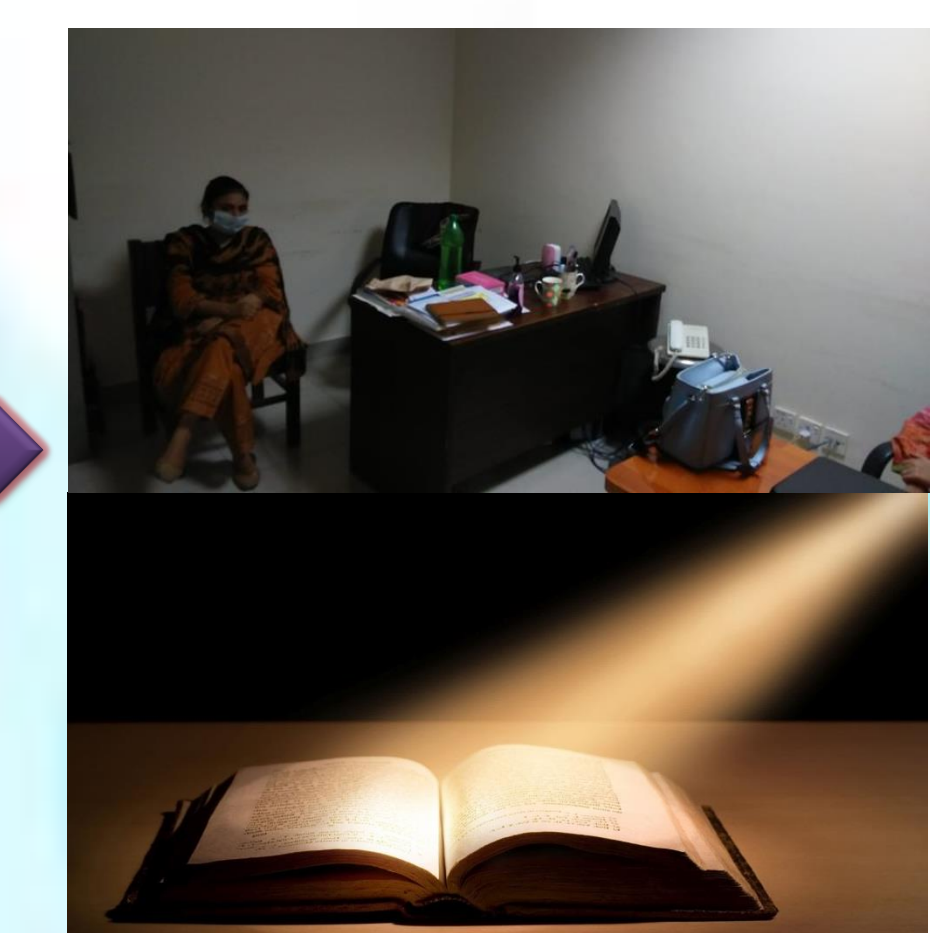
Findings from Figure 1 depicted that the cognitive performance of controls was significantly improved after listening to Surah Al Fatiha with respect to speed (p<0.01), memory (p<0.01), attention (p<0.01), flexibility (p<0.05), and problem-solving (p<0.01) while in PCOS females speed (p<0.001), memory (p<0.05), attention (p<0.01), flexibility (p<0.01) and problem-solving (p<0.05) were significantly enhanced.

## METHODOLOGY

### SAMPLING



### INTERVENTION



### COGNITIVE ANALYSIS



## EXPERIMENTAL PROTOCOL

Study was performed at Mamji Hospital, Karachi. Ethical approval was attained from the authorities

Total of 14 participants, with 7 controls and 7 PCOS afflicted were inducted into the protocol.

Pre-recorded Surah Al Fatiha in the voice of 'Qari Mishary Rashid Alafasy' was administered three times/day on the second day of their menstrual cycle till next cycle.

They listened to the verses 3 times/day (i.e., in the morning, afternoon, and at night). They followed a similar pattern everyday. Daily Reminders were sent through Whatsapp and personnel contacts.

Pre- and Post-intervention monitoring was performed. Cognitive analysis was evaluated by Lumosity online software



Selected games evaluated cognitive functions including Lost in migration to monitor selective attention, Tidal treasure for working memory, Speed match overdrive for information processing, Space trace for spatial fluency, and Pet detective for problem-solving.

Speed match overdrive, lost in migration, and space trace had a time restraint of forty-five seconds, pet detective had a time bonus of 3000 with three rounds.

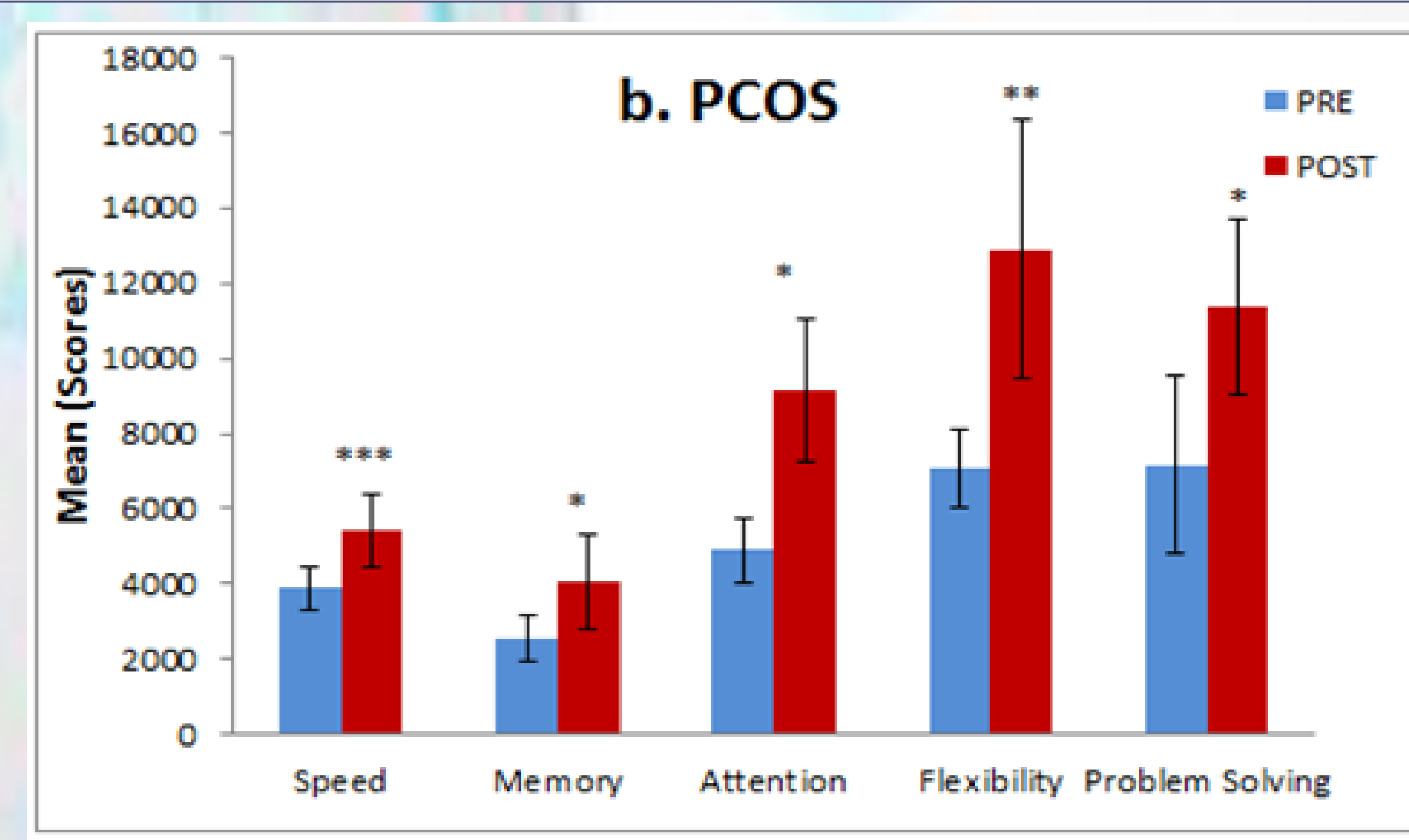
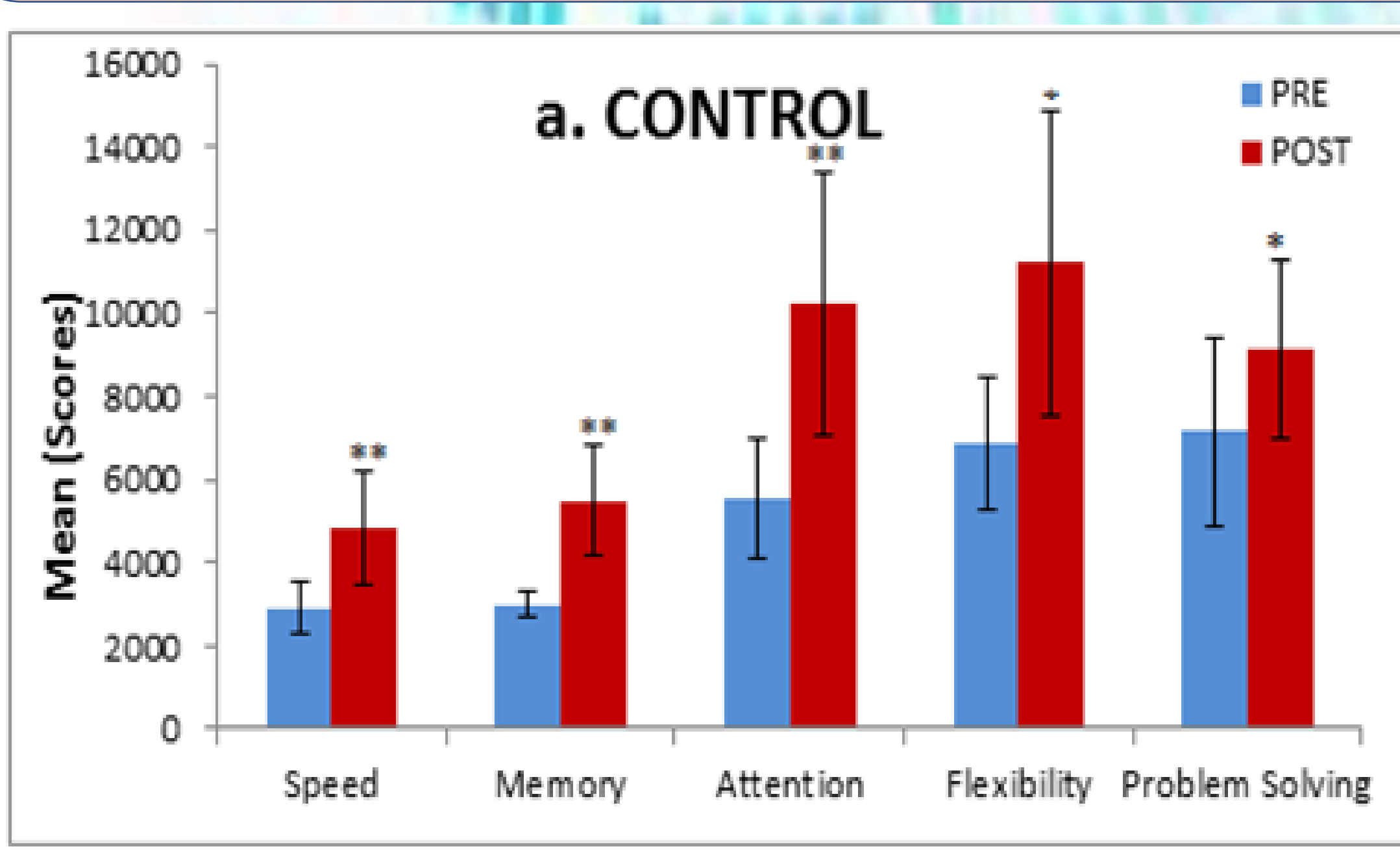


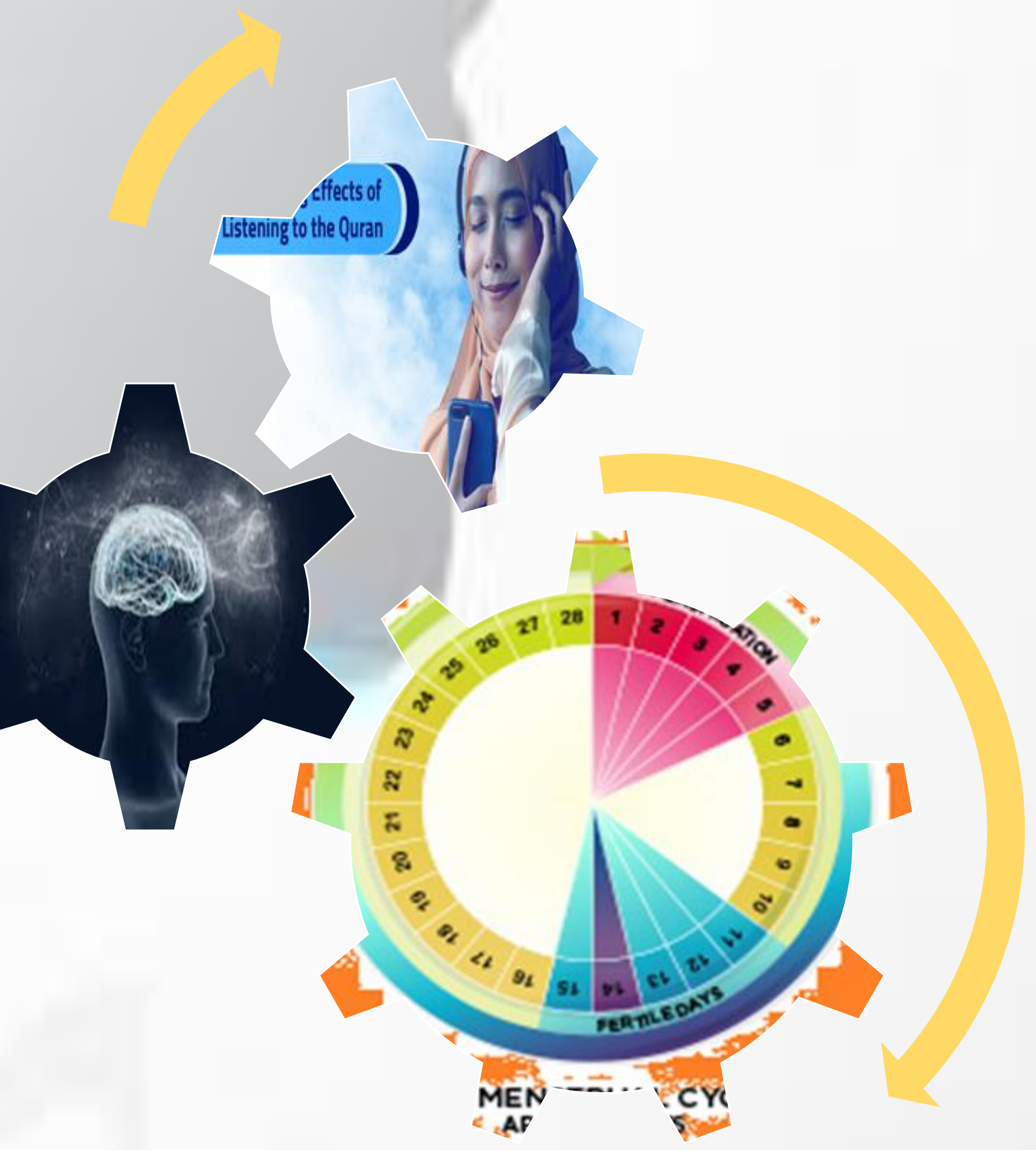
Figure 1: Comparison of Cognition scores with respect to Pre and Post intervention of Surah Al Fatiha of Controls (a) and PCOS (b). Significant differences by paired t-test (\*p<0.05, \*\*p<0.01) and (\*\*\*)p<0.001 from the Pre-intervention scores.

## CONCLUSION

Listening to Surah Al Fatiha improved cognition and regularized the menstrual cycle.

## REFERENCES

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2. Franik, Grzegorz, et al. "The impact of sex hormones and metabolic markers on depressive symptoms and cognitive functioning in PCOS patients." Gynecological Endocrinology 35.11 (2019): 965-969.
3. Abdekhoda et al. "The Holy Quran and Treatment of Mental and Physical Diseases." Pastoral Psychology (2022): 1-13.



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