

Influence of Memory on Yoga and Aerobics among South Indian Population

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Abstract:

Introduction: The dictionary meaning of ‘aerobic’ is relating to or utilizing oxygen. These exercises involve, utilize, or increase oxygen consumption to stimulate the metabolism process in

the body. Yoga means union of body and mind. Yoga is a combination of yoga asanas, pranayama and meditation.

Materials and methods: A cross sectional study was conducted among south indian population through a questionnaire. The questionnaire consisted of 10 questions and was circulated to the target population.

Result: Survey population was efficient enough to reach a conclusion regarding the knowledge of the south indian population about their opinions on which both have better influence of memory on yoga and aerobics.

Conclusion: From the study it is evident that yoga has a greater influence on memory than aerobics. Yoga and meditation help in enhancing memory and cognitive function. Aerobics improves the cognitive capacity of a person to some extent.

Keywords: Yoga; Aerobics; Memory; Cross sectional study; south indian population

Introduction:

Yoga is a form of exercise that differs from aerobic exercise because of its meditative component. The positive effects of meditation have been shown to be numerous. Yoga meditation requires focusing on a specific point, the individual learns to control conscious thought and keep it focused. Yoga was found to be associated with improvement on a cognitive task of attention and concentration. Yoga has been shown to produce greater positive changes in mood than exercise, and has been shown to produce greater improvements in cognition than meditation. Both short and long term bouts of aerobic exercise can produce positive changes in cognitive functioning (1). Meditation and aerobic exercise are helpful in reducing depression and improving short-term memory and attention, but aerobic exercise seems to be more beneficial.

Aerobic exercise is strongly associated with improving and maintaining the memory and attention. Meditation improves visual and spatial processing thereby enhancing the efficiency in retrieving short and long-term memory in addition to reducing anxiety and depression (2). Memory is an ability to recall past events or previously learned information or skills. Yoga is considered a mind and body practice with historical origin. Yoga engages both the top-down and bottom-up systems. By coordinating breath with movement, we become increasingly more aware of the physical and mental events that shape our experience and are better able to focus and sustain attention. Yoga involves the integration of physical movement with breath awareness and helps in achieving focus. Yoga involves the integration of physical movement with breath awareness and helps in achieving focus (3).

Yoga facilitates communication between the brain and body, and the integration of both top-down and bottom-up cognitive processing. All these practices are intended to develop a certain type of awareness within oneself. Yoga is a powerful stream of knowledge, which enables the practitioners to achieve radiant physical health, serene mind, and continues spiritual uplift (4). Inverted yoga positions have been associated with claims of increased memory and attention due to increased blood flow to the brain. Yoga can prevent memory lapses and enhance concentration. It can also improve recall powers by increasing circulation to the brain. Adolescents who practice yoga have had higher concentration levels and exhibited better short term memory. Despite the facilitatory role of yoga and meditation on our day-to-day activities,

cognitive functions and well-being, the practice of yoga has not yet become a regular part of our life (5).

The aim of this study is to determine the influence of memory on yoga and aerobics among the south indian population. To know which has a greater influence among yoga and aerobic exercises over memory.

Materials and methods:

A cross sectional study was conducted among south indian population through a questionnaire. The questionnaire consisted of 10 questions and was circulated to the target population. All the data were collected and analysed for statistical significance.

Result and Discussion:

This survey was conducted among 100 individuals of the South Indian population. The result of this survey reflects the influence of yoga and aerobics on memory among the South Indian population. From the survey conducted it is evident that yoga is preferred by nearly 60.42% of the population while the remaining 39.58% prefer the practice of aerobics. It also clearly depicts that yoga has a greater influence on memory than aerobics and it proves us that 89.9% of the participants prefer yoga as easy to learn on a greater basis while the remaining 10.2% preferred aerobics.

The present study aimed to examine a primary hypothesis that both yoga and aerobic exercise would benefit memory in female patients with early psychosis, with a superior effect on attention through yoga. The secondary objective was that exercise-induced improvements in cognition might be correlated with clinical improvement, and that aerobic exercise would be associated with an increase in hippocampal volume (6). The present study reveals that yoga practice can positively impact brain health. behavioral interventions like yoga may hold promise to mitigate age-related and neurodegenerative declines. This article aims to summarize the current knowledge of yoga practice and its documented positive effects for brain structure and function, as assessed with MRI, fMRI, and SPECT (7).

This article aims at exploring the commonalities and differences between yoga and physical exercise in terms of concepts, possible mechanisms and effectiveness for health benefits. Emphasis on breath regulation, mindfulness during practice, and importance given to maintenance of postures are some of the elements which differentiate yoga practices from physical exercises (8). This article aims to investigate whether acute mild and moderate aerobic exercise improve working memory, and whether there exist inter-individual differences in improvements in working memory. The results revealed that improvements in working memory function after a single session of aerobic exercise depend on baseline working memory function (9).

This study aimed to investigate the influence of yoga and aerobic exercise on fatigue, pain, and psychosocial status among multiple sclerosis patients. Yoga and aerobics exercise could decrease

some of the Multiple sclerosis symptoms, therapeutic costs, hospital stay, and days lost from work as well as increasing the patients' efficiency (10). Yoga and aerobic exercise appear to have differential beneficial effects in attention and memory. Yoga improved the semantic encoding and the ability of using learning strategy, while aerobic exercise facilitated more the numeral working memory. Possible increment in the mid-anterior corpus callosum and thalamus proper after yoga intervention may indicate a novel neural mechanism mediating the effect of yoga in psychosis patients (11).

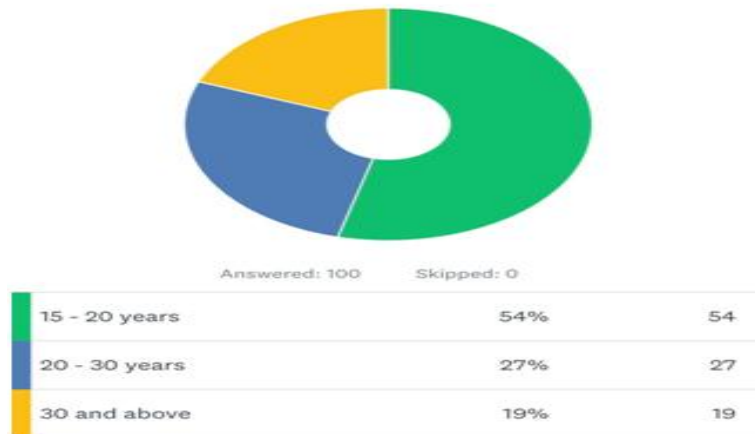


Figure 1: This pie chart represents the distribution of the respondents based on their age where 54% were between 15-20 years, 27% between 20-30 years and 19% were 30 and above.

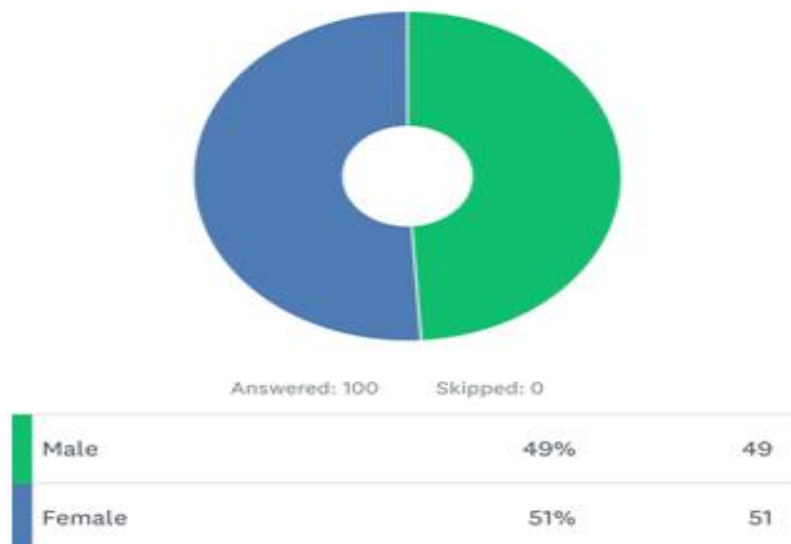


Figure 2: This pie chart represents the distribution of the respondents based on their sex. Majority were females 51% and the remaining were males 49%.

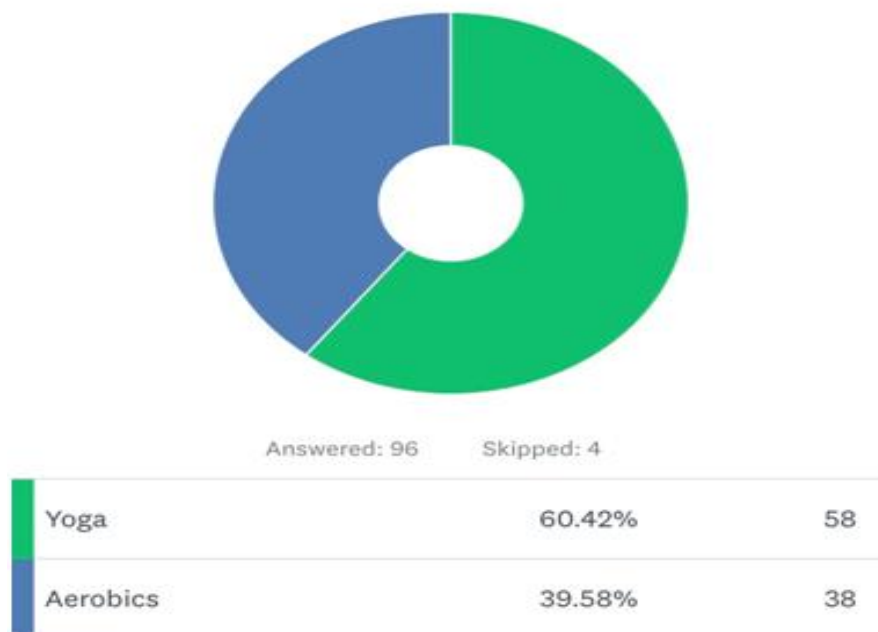


Figure 3: This pie chart represents the distribution of respondents based on what they prefer. Yoga was preferred the most 60.42% and aerobics was preferred 39.58%.

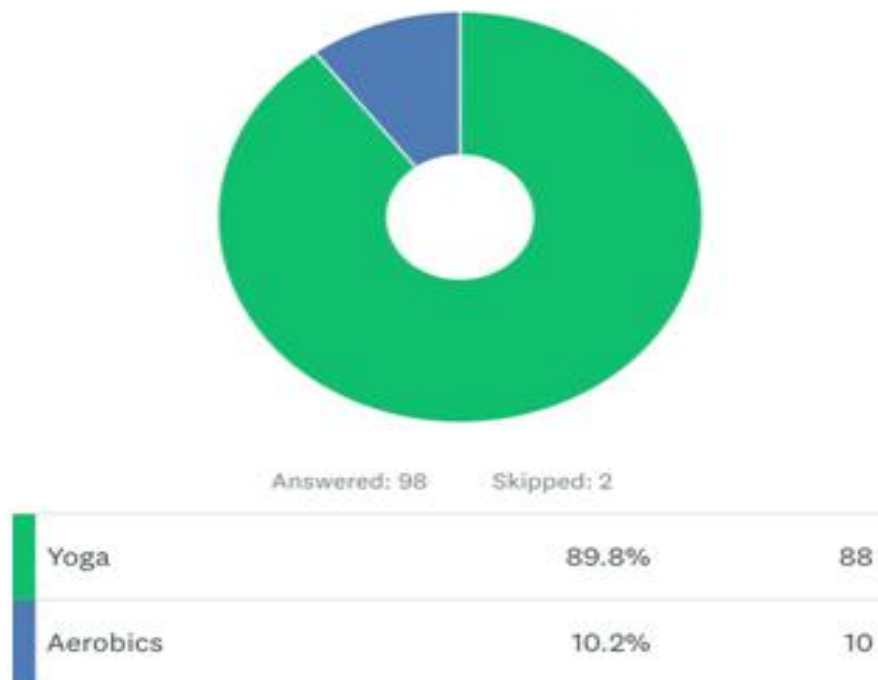


Figure 4: This pie chart shows the distribution of the respondents based on greater influence of memory. Majority of the participants preferred yoga 89.8% and remaining 10.2% preferred aerobics.

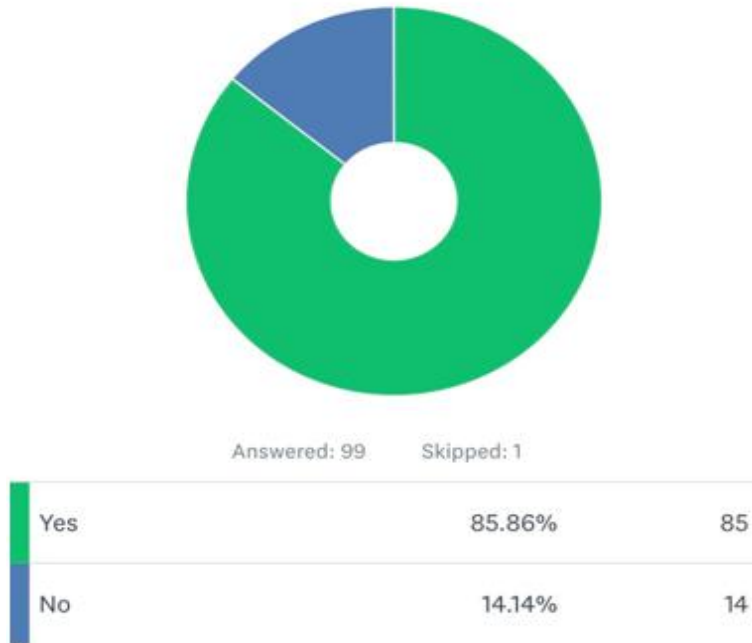


Figure 5: This pie chart shows the distribution of respondents on their importance to follow yoga and aerobics to enhance memory. Majority of the participants approved 85.86% and the remaining disapproved 14.14%.

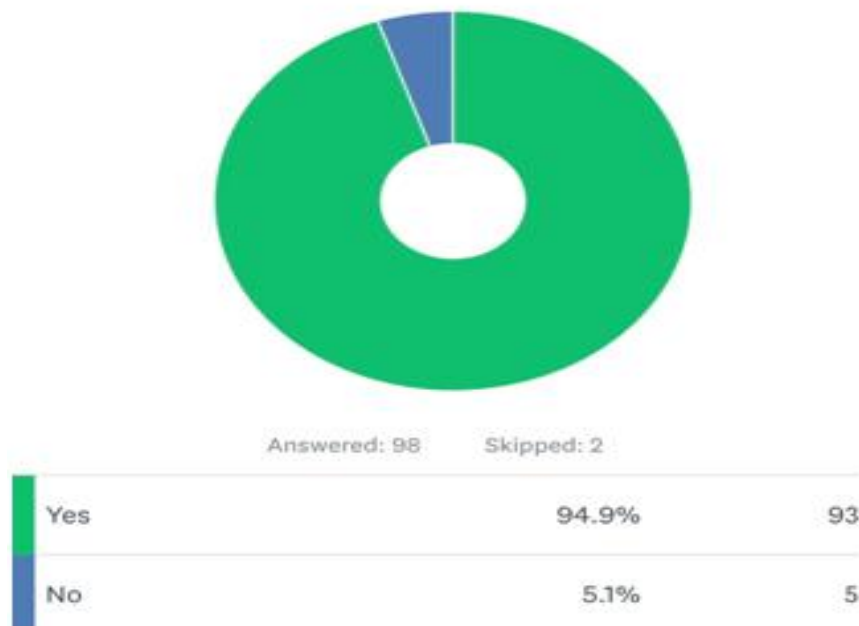


Figure 6: This pie chart shows the distribution of the respondents on their awareness on yoga having greater influence on memory than aerobics. Majority of the participants were aware 94.9% and the remaining were unaware 5.1%.

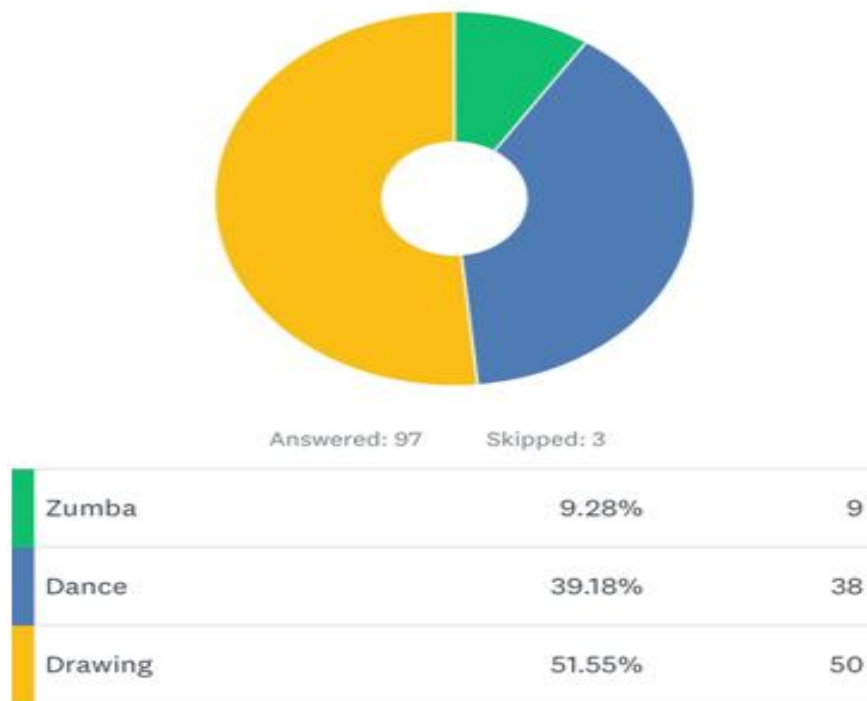


Figure 7: This pie chart represents the distribution of respondents on their other interests that has influence on memory. Majority of the participants opted for drawing 51.55%, dance 39.18% and remaining zumba 9.28%.

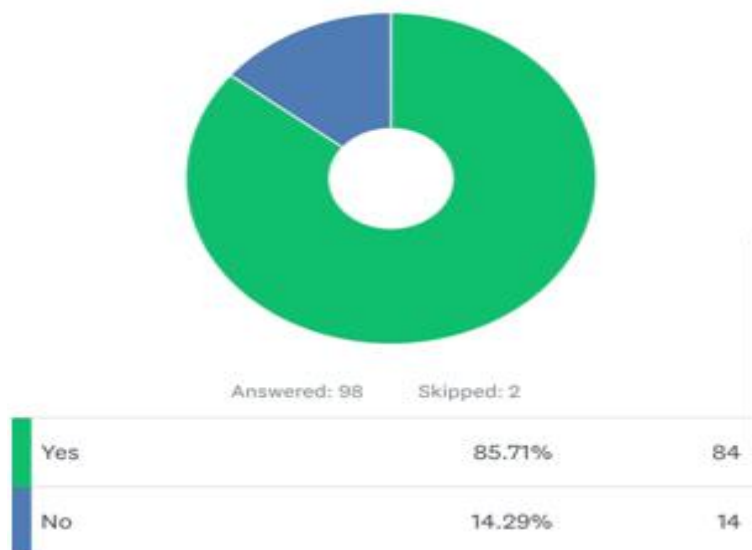


Figure 8: This pie chart represents the distribution of the respondents on their awareness of practicing yoga and aerobics making a difference in memory. Majority of the participants were aware 85.71% and the remaining were unaware 14.29%.

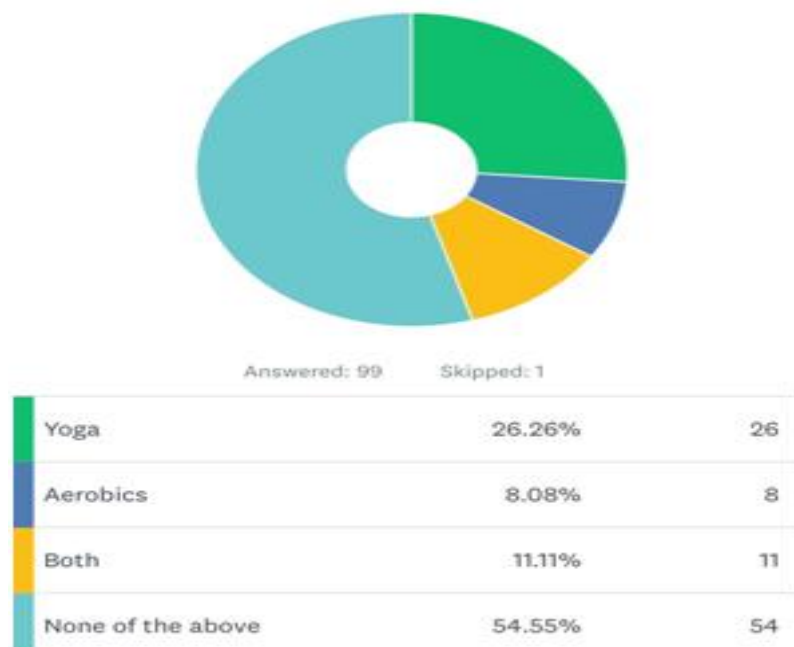


Figure 9: This pie chart represents the distribution of the respondents who practice aerobics and yoga. Majority of the participants did not practice both 54.55%, yoga practiced 26.26%, aerobics practiced 8% and both were 11.11%.

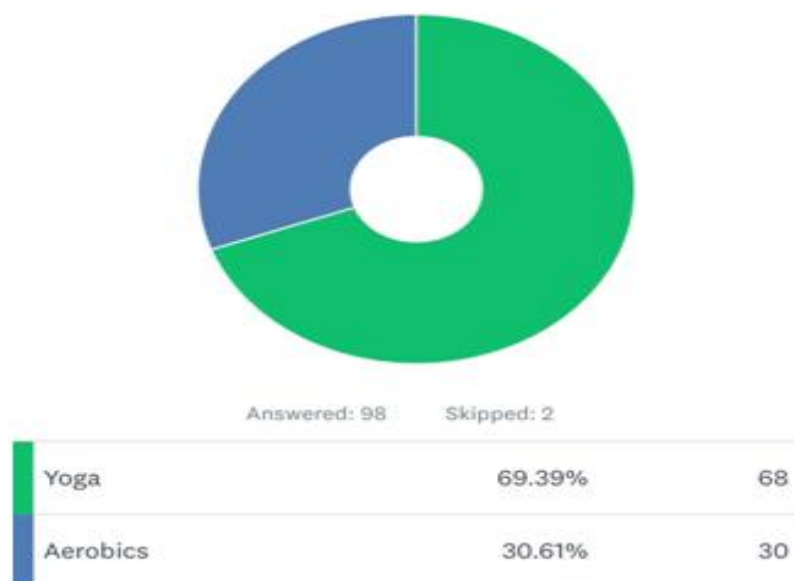


Figure 10: This pie chart represents the distribution of respondents on their view of which is easy to learn. Majority of the participants opted yoga 69.39% and others opted aerobics 30.61%.

Conclusion:

Yoga improves brain functioning more than aerobic exercise. Yoga being a combination of both exercises and meditation has greater positive changes than aerobics. Yoga which emphasises mind - body integration, is theorised to attenuate memory by increasing the relaxation response through activation of parasympathetic nervous system.

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