

Comparison of Quality of Life and Sleep Quality Between Morning and Evening Yoga Practitioners Among Middle-Aged Women

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Abstract:

➤ Background:

Yoga is widely practiced for physical and psychological well-being, but the relationship between usual practice timing and quality of life and sleep quality remains less explored in middle-aged women.

➤ Objective:

To compare quality of life and sleep quality between middle-aged women who regularly practiced yoga in the morning and those who practiced yoga in the evening.

➤ Methods:

A comparative cross-sectional observational study was conducted among 46 women aged 40–60 years who had practiced yoga regularly for at least four weeks. Participants were classified according to their usual practice timing into a morning yoga group (n=23) and an evening yoga group (n=23). Quality of life was assessed using the WHOQOL-BREF and sleep quality using the Pittsburgh Sleep Quality Index (PSQI). Descriptive statistics, normality testing and an unpaired t-test were used for between-group comparison, with $p < 0.05$ considered statistically significant.

➤ Results:

The morning group had higher mean scores in Physical Health (83.18 ± 9.17 vs 80.54 ± 8.79 ; $p = 0.325$), Psychological Health (82.44 ± 7.72 vs 79.24 ± 6.81 ; $p = 0.143$), and Environment (85.44 ± 9.64 vs 83.32 ± 11.00 ; $p = 0.492$). The evening group had a higher Social Relationships score (85.81 ± 7.59 vs 83.93 ± 6.52 ; $p = 0.372$). Mean PSQI score was lower in the morning group (3.43 ± 2.29 vs 3.91 ± 2.29 ; $p = 0.483$). None of the between-group differences was statistically significant.

➤ Conclusion:

Both groups demonstrated generally favourable quality-of-life and sleep-quality scores, with no statistically significant differences according to usual yoga practice timing. Larger longitudinal or randomized studies are needed to clarify whether practice timing is independently associated with these outcomes.

Keywords: Yoga; Morning Yoga; Evening Yoga; Quality of Life; Sleep Quality; Middle-Aged Women.

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I. INTRODUCTION

Yoga is a mind–body practice incorporating physical postures, breathing regulation, meditation and related practices. Regular yoga practice has been associated with

physical, psychological and overall well-being. Quality of life is multidimensional and includes an individual's perception of physical health, psychological state, social relationships and environment.

The timing of yoga practice is a relatively less explored aspect of yoga research. Chronotype describes an individual's tendency to be more alert or active at particular times of the day and is related to circadian rhythms that regulate sleep–wake patterns and daily physiological functions. Morning and evening yoga may interact differently with daily routines and sleep-related behaviour.

Middle age, particularly 40–60 years in women, may be accompanied by physical, psychological and lifestyle changes that influence sleep and perceived quality of life. Previous research has reported beneficial associations of yoga with sleep, insomnia and quality of life. Recent research has also examined morning versus evening yoga, but evidence specifically comparing usual morning and evening practice among middle-aged women remains limited.

Therefore, the present study compared quality of life and sleep quality between middle-aged women who regularly practiced yoga in the morning and those who regularly practiced it in the evening.

II. MATERIALS AND METHODS

➤ Study Design and Participants

A comparative cross-sectional observational study was conducted over six months among women aged 40–60 years who regularly practiced yoga in the selected study setting. A total of 46 participants were included. Participants were classified according to their usual yoga practice timing into a morning yoga group (n=23) and an evening yoga group (n=23). Purposive sampling was used.

➤ Eligibility Criteria

Participants were included if they were willing to participate, aged 40–60 years, had practiced yoga regularly for at least four weeks, predominantly practiced yoga in either the morning or evening, and were able to complete the quality-of-life questionnaire. Participants with chronic illnesses likely to affect quality of life, psychiatric disorders or psychotropic medication use, physical disabilities limiting activity, pregnancy, regular participation in other forms of exercise, regular practice at both morning and evening

times, or diagnosed sleep disorders requiring ongoing medical treatment were excluded.

➤ Outcome Measures

- **WHOQOL-BREF:** The WHOQOL-BREF is a standardized World Health Organization questionnaire assessing perceived quality of life across four principal domains: Physical Health, Psychological Health, Social Relationships and Environment. Domain scores in the present dataset were reported as transformed scores.
- **Pittsburgh Sleep Quality Index:** The PSQI is a self-rated questionnaire assessing subjective sleep quality and sleep disturbances over the preceding month. It contains 19 self-rated items grouped into seven components and produces a global score from 0 to 21, with higher scores indicating poorer sleep quality.

➤ Procedure and Ethics

Institutional ethical approval was obtained from the institutional ethical committee of Dr. Ulhas Patil College of Physiotherapy, Jalgaon. Eligible participants were briefed about the study and written informed consent was obtained. A brief demographic assessment was completed. Participants were classified according to their usual yoga practice timing, and the WHOQOL-BREF and PSQI were administered and scored according to their respective scoring procedures.

➤ Statistical Analysis

Data were compiled and analysed using GraphPad Prism as reported in the project report. Continuous variables were expressed as mean±standard deviation and categorical variables as frequency and percentage. The Kolmogorov–Smirnov test was used to assess normality. As the data were considered normally distributed, an unpaired t-test was used for comparison between the two independent groups. Statistical significance was set at $p < 0.05$.

III. RESULTS

A total of 46 women were included, with 23 participants in each group. The mean age was 45.87 ± 2.91 years in the morning group and 47.52 ± 4.45 years in the evening group.

Table 1 Comparison of Age Between Morning and Evening Yoga Groups.

Variable	Morning yoga (n=23)	Evening yoga (n=23)	p value
Age, years	45.87 ± 2.91	47.52 ± 4.45	0.143

Table 2 Comparison of WHOQOL-BREF Domain Scores Between Groups.

WHOQOL-BREF domain	Morning yoga Mean±SD	Evening yoga Mean±SD	p value
Physical Health	83.18 ± 9.17	80.54 ± 8.79	0.325
Psychological Health	82.44 ± 7.72	79.24 ± 6.81	0.143
Social Relationships	83.93 ± 6.52	85.81 ± 7.59	0.372
Environment	85.44 ± 9.64	83.32 ± 11.00	0.492

Table 3 Comparison of PSQI Global Scores Between Groups.

Outcome	Morning yoga (n=23)	Evening yoga (n=23)	p value
PSQI global score	3.43 ± 2.29	3.91 ± 2.29	0.483

The morning group had numerically higher Physical Health, Psychological Health and Environment scores, whereas the evening group had a numerically higher Social Relationships score. The morning group also had a numerically lower PSQI score. None of the between-group differences was statistically significant ($p > 0.05$).

IV. DISCUSSION

The present study compared quality of life and sleep quality among middle-aged women who regularly practiced yoga in the morning or evening. The findings showed generally favourable scores in both groups, with no statistically significant differences between the two practice-timing groups.

The Physical Health domain was higher in the morning group (83.18 ± 9.17) than in the evening group (80.54 ± 8.79), although the difference was not statistically significant. Regular yoga incorporates stretching, strengthening, balance and controlled movement, which may support physical functioning. Previous research has reported improvements in quality of life and sleep quality following yoga practice, supporting the broader relationship between regular yoga and well-being.

The Psychological Health score was also numerically higher in the morning group (82.44 ± 7.72) than in the evening group (79.24 ± 6.81). Yoga combines movement, breathing and relaxation practices that may support stress management and emotional well-being. Afonso et al. reported reduced insomnia severity and improved quality of life following yoga in postmenopausal women with insomnia. However, the present cross-sectional comparison did not demonstrate a statistically significant difference between practice timings.

Social Relationships showed a different numerical pattern, with a higher mean score in the evening group (85.81 ± 7.59) than in the morning group (83.93 ± 6.52). Although evening practice could coincide with opportunities for social interaction in some settings, this factor was not directly measured in the present study and should therefore not be interpreted as an explanation for the observed difference.

The Environment domain was numerically higher in the morning group (85.44 ± 9.64) than in the evening group (83.32 ± 11.00). Environmental quality of life is influenced by multiple factors, including living conditions, financial resources, safety and access to services. Therefore, the observed numerical difference cannot be attributed solely to yoga practice timing.

For sleep quality, the morning group had a lower mean PSQI score (3.43 ± 2.29) than the evening group (3.91 ± 2.29), indicating numerically better sleep quality because lower PSQI scores represent better sleep. The difference was not statistically significant. Previous studies have reported beneficial effects of yoga on sleep quality among women and older adults, but those findings cannot establish that

morning practice is better than evening practice in the present population.

The findings can also be considered alongside the recent randomized trial by Iyer et al., which directly compared morning and evening tele-yoga in young adults. That study reported benefits from both timings and additional morning-related effects for some outcomes. The present study showed a similar numerical pattern for several outcomes, but its cross-sectional design and smaller sample do not permit a causal conclusion about the effect of practice timing.

Overall, the present findings suggest that both morning and evening yoga practitioners had favourable quality-of-life and sleep-quality scores. Because none of the between-group comparisons was statistically significant, the numerical differences should not be interpreted as evidence that one practice timing is superior.

V. LIMITATIONS

The study included a relatively small sample of 46 women from a specific setting, which may limit generalizability. Only women aged 40–60 years were included. Quality of life and sleep quality were assessed using self-reported questionnaires and may be affected by subjective reporting and recall. In addition, because the study was cross-sectional, the findings describe an association between usual yoga practice timing and outcomes rather than a causal effect of timing.

VI. CONCLUSION

Among middle-aged women who regularly practiced yoga, both morning and evening practitioners demonstrated generally favourable quality-of-life and sleep-quality scores. The morning group had numerically higher Physical Health, Psychological Health and Environment scores and a lower PSQI score, whereas the evening group had a numerically higher Social Relationships score. None of the observed between-group differences was statistically significant. Larger longitudinal or randomized studies are required to determine whether yoga practice timing itself contributes to differences in quality of life or sleep quality.

DECLARATIONS

- Ethics approval: Institutional ethical approval was obtained from the institutional ethical committee of Dr. Ulhas Patil College of Physiotherapy, Jalgaon. Add the approval/reference number if available.
- Informed consent: Written informed consent was obtained from participants.
- Funding: To be confirmed by the authors.
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