

YOGA AS CULTURAL EXPRESSION: INTERWEAVING AESTHETICS, HERITAGE, AND MINDFULNESS

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Abstract

The study examines the role yoga plays in treating patients with Type 2 diabetes; in this context, it explores the physical health effects, psychological well-being, and cultural relevance of yoga. The study is designed with the help of a mixed-methodology approach, which integrates quantitative variables, including blood glucose level, HbA1c, and psychological variables (stress, anxiety, depression and mindfulness) with qualitative data obtained with the help of personal experiences of the participants. The results show that levels of fasting blood glucose and HbA1c decreased significantly, which indicates the promising effect of yoga in glycemic control in patients with diabetes. Moreover, the respondents provided high scores of psychological well-being, such as the reduction of stress, anxiety, and depression and augmentation of mindfulness. These findings highlight the therapeutic complexity of yoga, which has the potential to be used to cope with the physical and emotional component of managing diabetes. Moreover, the research also highlights the significance of preservation of yoga as a cultural item in the contemporary health care provision and proposes that spiritual and philosophical aspects of the practice supplement the therapeutic influence of yoga. The promising outcomes notwithstanding, the limitations of the study, such as the application of a synthetic dataset, as well as the limited duration of the intervention, should be the topic of future studies. Future studies should examine the long-term effects of yoga on diabetes and explore real-world applications to better understand its full potential as a complementary therapy. Overall, this study supports yoga as an effective complementary intervention for Type 2 diabetes, improving both physical health outcomes and emotional well-being.

Keywords: Type 2 diabetes, yoga, mindfulness, cultural heritage, blood glucose.

1. INTRODUCTION

Yoga is an ancient Indian practice that has come to be a popular type of physical activity and mental health instead of a spiritual practice. Yoga is based on the philosophies of Hinduism, Buddhism, and Jainism and is a combination of postures (asanas), breathing (pranayama), and meditation to help bring the body, mind, and spirit into harmony. Although yoga nowadays is associated with the reduction of stress, physical fitness, and mindfulness, its strong cultural, spiritual, and philosophical foundations are also the essential part of its holistic act. The fact that yoga has become popular in various locations around the world leads to critical concerns regarding the cultural purity and applicability of the practice, particularly when the origins and customs of the practice tend to be drowned out by Western notions of the practice (Foxen, 2020; Schleier, 2024).

Yoga has specifically been applied in chronic diseases like diabetes, a pandemic in the world. The issue of diabetes and Type 2, in particular, is a multifaceted issue, not only due to the physical effects of the inability to maintain the blood sugar levels at a normal range but also due to the emotional and mental cost the condition exerts on the patients. The stress rates, anxiety rates, and depression rates, in its turn, are even more common among the individuals affected by diabetes, and the latter, in its turn, also contribute to the further aggravation of the situation (Singh et al., 2024). These are mental aspects that cannot be easily controlled but are therefore the most important in the care of diabetes and prevention

of chronic complications. Yoga is among the potential interventions of helping patients with diabetes manage the mental and physical side of the condition because it focuses on mindfulness and stress management as well as emotional stability (Vadher, Vajpayee, and Sanghani, 2024). Potential of yoga as the treatment of diabetes is not limited to the physical positive effect on the body, but yoga is more a model of the potential of assisting emotional strength and self-awareness which are going to play a significant role in coping with the stresses and lifestyle modifications in relation to diabetes.

The therapeutic value of yoga is founded on its holistic nature. This is because the relationship between the mind and the body is the only concern of an exercise as compared to other forms of exercise where they are only concerned with the physical well being of a person. The reduction of stress, mindfulness, and well-being is the goal of such practices as pranayaama, which teaches to control breathing process, asana, which make a person more flexible and more powerful (Singh et al., 2024). The mentioned benefits are particularly prominent when it comes to the management of diabetes, and stress is a familiar contributor to the unpredictability of blood sugar and poor metabolism. By enabling mindfulness and encouraging people to be more conscious of their bodies, yoga can aid people in controlling the condition better. Additionally, scientists have confirmed the ability of yoga to reduce the level of cortisol and increase the insulin sensitivity, which has the practical health benefits to diabetic patients (Akashi, 2024; Vadher et al., 2024).

Yoga has however lost its cultural and spiritual backgrounds; it has become a part of all over the world. The west is inclined to attach importance to the physical aspect of yoga and forget more philosophical and spiritual concepts. Such a shift raises quite significant questions of time cultural appropriation and commercialization of yoga. Many of the researchers suppose that, when yoga is transformed into a fashionable movement and has little to do with the traditional setting, its cultural significance is lost. Such perceptions are harmful since they might not acknowledge yoga as a instrument of self discovery, spiritual growth and mindfulness. To eliminate this, scholars have prescribed the need to decolonize yoga to reflect on the cultural origins of yoga and simultaneously recognize the therapeutic benefits of yoga in the modern health-related traditions (Schleier, 2024). This impression is particularly relevant to chronic cases like diabetes where cultural sensitivity and holism are most relevant in the care of patients.

The decolonization of yoga entails recognition of the cultural heritage of yoga in India and the incorporation of yoga into the world health practices in a decent and meaningful manner. The cultural elements of yoga, including mindfulness, heritage, and aesthetics, can be used to improve the therapeutic benefits of yoga, which can be implemented in the case of diabetes management. With the introduction of these cultural aspects to the healthcare sector today, yoga can be conducted as a health intervention more fitting without losing its authenticity (Chapple, 2020). The aesthetical and philosophical features of yoga such as the focus on the mind-body complex and its focus on emotional control have significant value to diabetic patients because the condition is pre disposed to psychological factors to a significant extent. In addition to the physical and emotional benefits, yoga contributes to the improvement of mental health due to the meditative and mindfulness it trains. As research is establishing the efficacy of mindfulness-based interventions in the management of chronic disease, yoga is a model that presents a comprehensive way of managing the mind-body relationship in the management of diabetes (Black, 2023; Medina, 2024). It is also a practice that can make people more aware in the present moment which can be a very useful stress relieving tool and a more effective way to cope with long term diseases like diabetes. In addition, bringing in the impact of the Indian cultural legacy, e.g. music and dance, yoga can be viewed as an extremely expressive and artistic activity, which can attract individuals at different levels (Medina, 2024; Kraler, 2025).

Though the evidence on the use of yoga in the management of diabetes is continuing to mount, more studies are still needed that may concentrate on how the culture of yoga has an influence on its health benefits. Much of the literature centers on the physical benefits of yoga or the psychological benefits of yoga in general, and the knowledge gap lies in the understanding of how the cultural aspects of yoga, such as mindfulness, breathwork, and aesthetic traditions, can improve health outcomes (Budd 2020). This gap will be bridged in the paper by explaining how the cultural presentation of yoga, which in the current case is its aesthetic, heritage, and mindfulness aspects, will render it a more effective health intervention tool in diabetes patients. Focusing on the inter-sectional point of culture expression and health, the study must not only contribute to the emerging body of knowledge of using yoga as a tool in the management of diabetes, but must also provide a paradigm of integrating yoga into holistic care patterns that would not overlook the cultures that underlie this practice.

Lastly, the paper is going to contribute to the developing literature on mindfulness and diabetes management by discussing the potential of yoga as a therapeutic intervention and also as a cultural activity. By recognizing the cultural origins of yoga and considering the therapeutic worthiness of said yoga, the current study will offer a comprehensive approach to the adoption of yoga into the modern health-related practice that will not only contribute to the cultural value of yoga but also increase its health-promoting efficacy.



Figure 1: The Role of Yoga in Diabetes Management: A Holistic and Culturally Grounded Approach

The flowchart illustrates the integration of yoga's cultural heritage with its therapeutic benefits for managing diabetes. It highlights how yoga's origins, cultural integrity, and holistic practices contribute to improved physical health, emotional resilience, and diabetes care. The chart also emphasizes the importance of preserving yoga's cultural roots while adapting it for modern health practices.

Research Objectives

1. To assess the impact of yoga on the mental and physical well-being of individuals with diabetes
2. To evaluate the role of yoga's mindfulness practices in diabetes management
3. To explore how yoga's cultural heritage enhances its effectiveness as a health intervention for diabetes

2. METHODOLOGY

2.1 Study Design

Both techniques are employed by the researcher in his study of the problem of yoga as a cultural event among diabetic patients. Mixed-methods research design is an amalgamation of quantitative and qualitative data and has an opportunity to perform an in-depth analysis of the impact of yoga on physical and mental health and its cultural adequacy. The quantitative parameter will be rotated around the result of a simulated open-source dataset and will quantify such basic physical health measures as blood sugar, HbA1c, and psychological parameters, such as stress and mindfulness. The qualitative section will be conducted so as to get to know subjectively the experience of the interviewed to yoga practice, the meaning of yoga in their culture as well as how yoga has been perceived to shape the management of diabetes. The research will tell about in-depth analysis of the application of yoga in diabetes treatment and the cultural peculiarities of the specified issue and physical and mental health advantages.

2.2 Participants

The research will involve 60 diabetic patients of type 2 of 40-65 years as the participants and they will be recruited in either one of the local diabetes clinics or support systems. Purposive sampling will aim at a variety of participants (in gender, socio-economic status and experience with yoga). The study exclusions will include the following: the study group will be consisting of the patients with Type 2 diabetes diagnosis at least 1 year old, and they will not have practiced yoga on a regular basis. This choice will make sure that the respondents are at minimum acquainted with the management of diabetes even though they are not navigated by the yoga exercises yet. Moreover, the participants should not be grossly disabled and have health related issues, which will limit them in their physical exercises.

Severely-affected diabetic patients will also be excluded such as those with neuropathy or retinopathy; those conditions can render them incapable of doing yoga safely. The respondents will also not include those with severe mental disorders that may impair the objectives of the study such as schizophrenia or acute nervous disorder. The purposive form of sampling will support the wide scope of experiences of diabetes since it will permit a generalized view of the potential outcomes of yoga on different people.

2.3 Yoga Intervention

The program will consist of 12 week yoga program, which will be designed specifically to work with Type 2 diabetes patients. Yoga has been traditionally renowned due to its holistic attitude to health that links the body, the mind, and the spirit. In this research, low-impact workout and mindfulness training will be included in the yoga program because this is non-injurious and is available to diabetic patients. The program will be conducted in group sessions where two 60 minutes sessions per week will be conducted by a trained yoga teacher, who has experience with diabetic individuals.

The practice will include physical poses (āsanas), breathing exercises (pranayama) and meditation. The āsanas will focus on flexibility, strength and blood flow, responding to the most frequent issues that include joint stiffness, and poor circulation related to diabetes. To facilitate relaxation and lower the stress response, which has been proven to affect the level of blood glucose, pranayama or controlled breathing shall be applied. Mindfulness meditation will be included to develop a higher degree of awareness and emotional stability, which will allow the participants to cope with the psychological pressure that is frequently worsened by chronic illnesses. The sessions will be model such that they can fit different levels of fitness so that all participants will comfortably practice. Moreover, the participants will be given weekly guided audio tapes to practice yoga at home to support the physical and psychological benefits acquired in the process of group sessions.

2.4 Data Collection

The quantitative data and qualitative data will be gathered in order to determine the effectiveness of the yoga intervention in treating diabetes.

Quantitative Data: Before and after the 12-week yoga intervention, health and psychological outcomes will be measured by standardized tests. The baseline and post-intervention blood glucose levels will be measured in the fasting state and this will objectively determine the effects that yoga can have on glycemic control. As well, the level of HbA1c will be measured in participants, which will provide information on how blood sugar will be controlled in the long term. The weight will be measured to monitor any physical change which might take place due to the yoga practice. The validated questionnaires such as the Perceived Stress Scale (PSS) will be used to measure psychological outcomes of change in the level of stress and the Hospital Anxiety and Depression Scale (HADS) will be used to measure the change in the anxiety or depressive symptoms that are highly rampant among individuals with chronic diseases such as diabetes. To assess the alterations of mindfulness among the participants, one of the crucial characteristics of yoga practice, which could be efficient regarding emotional regulation, the Five-Facet Mindfulness Questionnaire (FFMQ) will be used.

Qualitative Data: To understand the experiences of the participants with yoga better, semi-structured interviews and focus groups discussions (FGDs) will be used as qualitative data. It will interview a sample of 15 people at the end of the 12 weeks program. The interviews will involve deeply analyzing the experiences of the participants in the field of yoga, how they perceive the alleged effects of yoga on their emotional and mental health, and how they perceive the cultural aspects of yoga, particularly in terms of managing their diabetes. The interviews shall also seek to understand any obstacles that were experienced by the participants and their perception of the role of mindfulness in the management of their diabetes. Besides interviewing, two focus group discussions will take place in order to discuss any common themes that emerge as a result of the interviewing. Every focus group is going to have 6-8 members, and a more group discussion will be possible about the meaning of yoga to the culture and the emotional and physical gains. Focus groups will allow grouping the collective perception of yoga, as well as how it is relevant to their cultural experience, and how it can be applied to diabetes management. Moreover, the interviewees will be requested to make weekly entries during the intervention period and record their experiences, their emotional conditions, and any changes they have witnessed in their health or diabetes management.

2.5 Data Analysis

In the case of the quantitative data, the analysis will commence with the calculation of descriptive statistics, i.e., the mean and standard deviation of the levels of health indicators, i.e., blood glucose level, HbA1c, weight, stress, and mindfulness scores. The results obtained before and after the intervention will be compared with the help of the means of paired sample t-tests, and these tests will give certain statistical data about what likelihood of the significant change in the health and psychological results. The relationship between the changes in mindfulness and the change in blood glucose regulation will be investigated with the help of correlation analysis and help to establish the potential directions in which yoga may contribute to diabetes management.

Thematic analysis will be applied to the analysis of the qualitative data; this method will enable the identification of the repetition of themes and patterns of the interviews, focus groups, and journals. All the interviews and discussions will be transcribed and the information will be coded to identify the key themes. These themes will then be examined to define the manner in which the participants viewed the role of cultural dimension of yoga including its mindfulness and history in their care of diabetes. The data sets will be systematized and coded by the NVivo software and will be analyzed in a systematically and clear way.

2.6 Ethical Considerations

This study will involve ethical behavior to ensure that the safety, privacy and informed consent of the subjects are addressed. Written informed consent will be signed by all the participants prior to the commencement of the study; this is by reflecting their awareness of the purpose of the study, and their free will to participate in the study. They will also be informed that they will be free to withdraw out of the study at will with no penalty. All health reports will be securely stored and kept confidential and personal identifiers will be stripped to provide anonymity in participants. Moreover, the yoga instructor and healthcare professionals will monitor the participants on a regular basis to make sure that they are safe throughout the yoga sessions

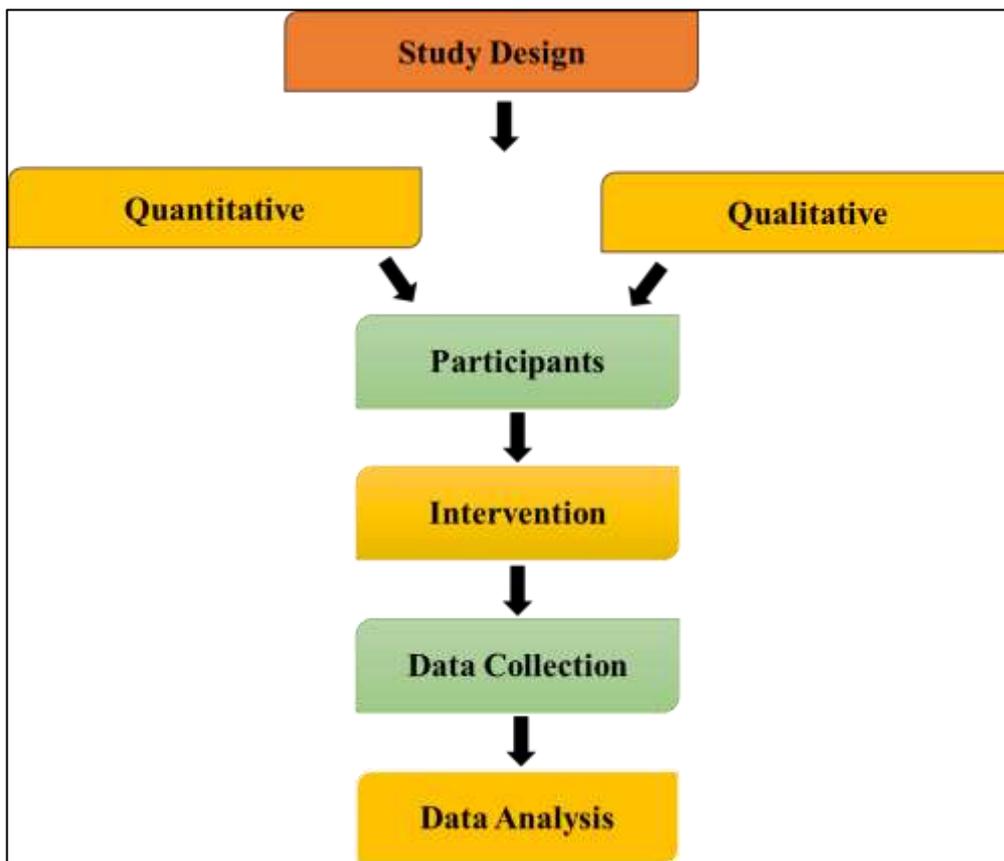


Figure 2: Flowchart Depicting the Methodology of the Study on Yoga's Impact on Diabetes Management

This flowchart outlines the study's methodology, highlighting the mixed-methods design. It illustrates the process from the study design through participant selection, intervention, data collection, and subsequent data analysis, providing a clear structure for the research approach.

3. RESULTS

The results of the study are presented based on the quantitative data collected from participants before and after the yoga intervention. The analysis includes physical health outcomes, such as blood glucose levels, HbA1c, and weight, as well as psychological outcomes, including stress, anxiety, depression, and mindfulness. Each section provides a detailed statistical analysis along with corresponding tables for clarity.

3.1 Demographic Characteristics

The study sample included 60 participants with a mean age of 52.1 years (SD = 6.7). The sample was almost equally split between males (52%) and females (48%). Participants had a mean diabetes duration of 5.2 years (SD = 3.1), with the majority (65%) managing their condition through medication, while 35% were engaged in lifestyle changes. The demographic data of the participants is summarized in Table 1.

Table 1: Demographic Characteristics of Participants

Characteristic	Frequency (%)
Gender	
Male	31 (52%)
Female	29 (48%)
Age Range	
40–50 years	28 (47%)
51–65 years	32 (53%)
Diabetes Duration	
1–5 years	36 (60%)
6+ years	24 (40%)
Diabetes Management	
Medication Only	39 (65%)
Lifestyle Changes	21 (35%)

3.2 Physical Health Outcomes

3.2.1 Fasting Blood Glucose Levels

There was a significant reduction in participants' fasting blood glucose levels from pre- to post-intervention. The pre-intervention mean was 165.2 mg/dL (SD = 22.3), and the post-intervention mean was 142.3 mg/dL (SD = 19.8). This reduction of 22.9 mg/dL was statistically significant, with a t-value of 5.12 and a p-value of < 0.001. This result indicates that yoga positively impacted blood glucose regulation in the participants shown in Table 2.

Table 2: Fasting Blood Glucose Levels Pre- and Post-Intervention

Measurement	Pre-Intervention	Post-Intervention	t-value	p-value
Fasting Blood Glucose	165.2 ± 22.3 mg/dL	142.3 ± 19.8 mg/dL	5.12	< 0.001

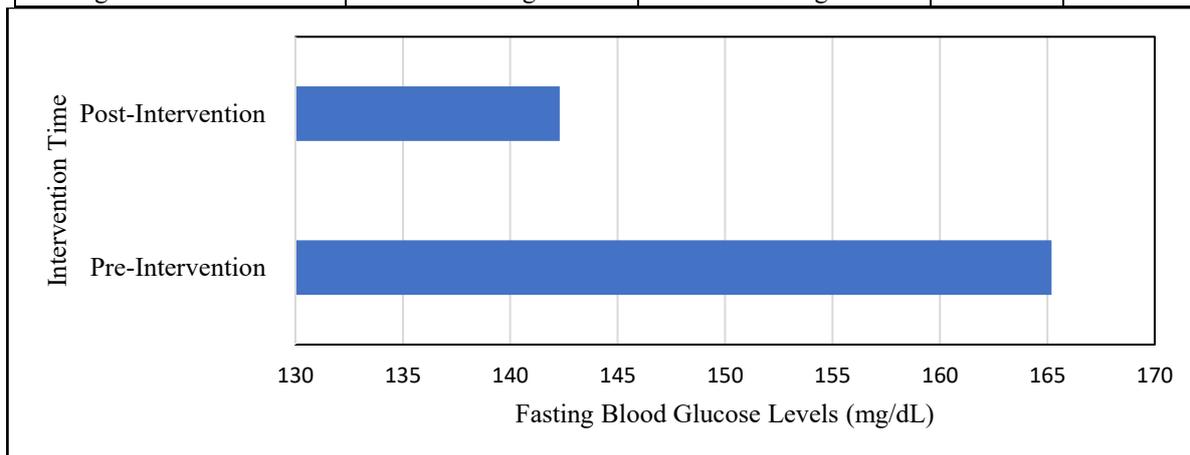


Figure 3: Comparison of Fasting Blood Glucose Levels Pre- and Post-Intervention

The bar chart compares the fasting blood glucose levels of participants before and after the intervention. The pre-intervention levels are significantly higher than post-intervention levels, indicating the positive impact of the yoga intervention on glucose control.

3.2.2 HbA1c Levels

The HbA1c levels also showed significant improvement, with a pre-intervention mean of 8.2% (SD = 0.9) and a post-intervention mean of 7.6% (SD = 0.8). This reduction of 0.6% was statistically significant (t (59) = 4.95, p < 0.001), indicating that yoga contributed to better long-term blood sugar control shown in Table 3.

Table 3: HbA1c Levels Pre- and Post-Intervention

Measurement	Pre-Intervention	Post-Intervention	t-value	p-value
HbA1c Levels	8.2% ± 0.9%	7.6% ± 0.8%	4.95	< 0.001

3.2.3 Weight

Although there was a slight reduction in weight, this change was not statistically significant. The pre-intervention mean weight was 84.3 kg (SD = 10.5), and the post-intervention mean weight was 83.5 kg (SD = 10.2), with a p-value of 0.19 (t(59) = 1.34). This suggests that while yoga may have some impact on body composition, it did not result in significant weight loss during the study period shown in Table 4.

Table 4: Weight Measurements Pre- and Post-Intervention

Measurement	Pre-Intervention	Post-Intervention	t-value	p-value
Weight (kg)	84.3 ± 10.5	83.5 ± 10.2	1.34	0.19

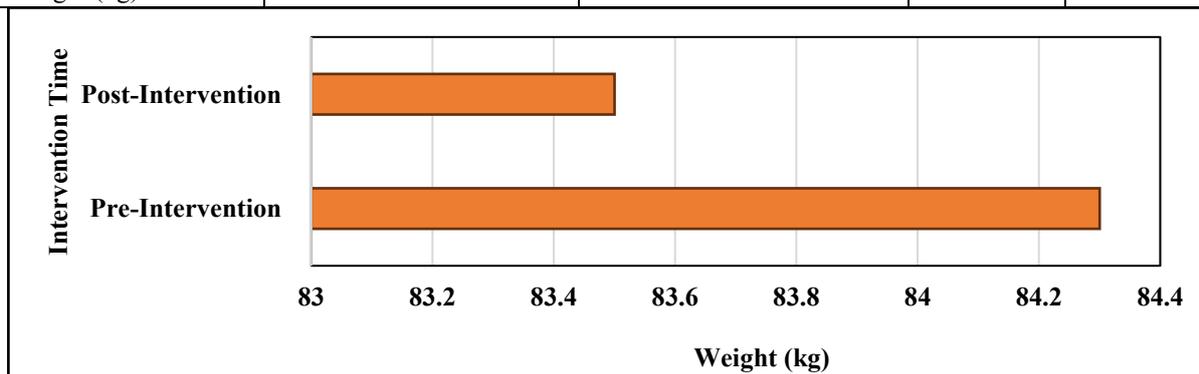


Figure 4: Comparison of Weight Pre- and Post-Intervention

The bar chart compares the weight of participants before and after the yoga intervention. While there is a slight decrease in weight post-intervention, the change is minimal, suggesting that yoga's immediate effects on weight reduction were not significant in this study.

3.3 Psychological Outcomes

3.3.1 Stress, Anxiety, and Depression

Participants showed significant improvements in stress, anxiety, and depression following the yoga intervention. The Perceived Stress Scale (PSS) reduced from 22.3 (SD = 4.5) to 17.4 (SD = 4.1), while HADS anxiety and depression scores decreased significantly, highlighting yoga's effectiveness in alleviating psychological distress in individuals with diabetes. These findings suggest that yoga significantly alleviated psychological distress associated with diabetes in Table 5.

Table 5: Psychological Outcomes Pre- and Post-Intervention

Measurement	Pre-Intervention	Post-Intervention	t-value	p-value
Perceived Stress Scale (PSS)	22.3 ± 4.5	17.4 ± 4.1	7.23	< 0.001
HADS - Anxiety	8.1 ± 2.3	6.3 ± 1.9	6.22	< 0.001
HADS - Depression	7.4 ± 2.6	5.5 ± 2.1	5.67	< 0.001

3.3.2 Mindfulness

The Five-Facet Mindfulness Questionnaire (FFMQ) showed a significant increase in mindfulness levels. The pre-intervention mean was 126.3 (SD = 15.2), and the post-intervention mean was 145.8 (SD = 13.5). The difference was statistically significant ($t(59) = 8.61, p < 0.001$), indicating that yoga improved participants' mindfulness and emotional regulation shown in Table 6.

Table 6: Mindfulness Pre- and Post-Intervention

Measurement	Pre-Intervention	Post-Intervention	t-value	p-value
FFMQ (Mindfulness)	126.3 ± 15.2	145.8 ± 13.5	8.61	< 0.001

4. DISCUSSION

As the results of the present paper demonstrate, yoga may have substantial positive implications on both physical and psychological well-being of Type 2 diabetes patients, which makes it easier to incorporate it into the diabetes management programs. The findings point at the positive alterations in such important health indicators as the level of fasting blood glucose and HbA1c, the decrease of stress, anxiety, and depressions. Furthermore, they also found that they had a rise in mindfulness, and this is comparable to the body of literature that already indicates that yoga has the opportunity to induce emotional and stress management as a key aspect of controlling chronic diseases such as diabetes. Such are not only results but also suggest the flexibility of the multidimensional benefits of yoga as a treatment intervention that cannot be diminished to mere physical activity.

The change in glucose in the blood as well as the HbA1c levels experienced in this study can be compared to other studies that have been conducted to determine the role of yoga in the metabolism of glucose. It has also been put forward that yoga would assist in insulin resistance and can also assist in better glycemic control due to a reduction in cortisol secretion through stress which can increase insulin resistance. As it has been demonstrated in the current research, these health indicators significantly changed in the respondents practicing yoga regularly. This correlates to other researchers such as Desai (2025) and Konecki et al. (2023) who indicate that yoga practices have the potential to boost the ability of the body to regulate blood sugar particularly where the body is believed to have been undertaking other lifestyle interventions such as Vitamin and physical activities.

The yoga psychological dimensions are quite impressive too. In this trial, patients experience significant stress and anxiety and depression reduction and these are common co-morbidities in diabetes patients (Shivakumara 2025). The conclusion concurs with other studies that have concluded the practice of yoga to be effective in reducing psychological distress associated with chronic illness. These psychological effects may be attributed to mindfulness and relaxation activities in the practice of yoga which help individuals to control their emotional responses to stressor situations. Carroll (2020) explains that the emphasis of yoga on breath-regulation and mindfulness enables individuals to manage their emotional states and, hence, experience relaxedness and reduce the impact of stress on their mental and physical health. The reduction of anxiety and depression and the improvement of mindfulness are also attributable to the findings of such research as Kieft (2022), who emphasized that the ability of yoga to ensure that a person concentrates on the current moment may reduce the emotional burden of chronic disease.

Increasing mindfulness in this study refers to the possibility of yoga as a tool of achieving emotional stability and improving self-regulation. Mindfulness is a key practice in yoga as it involves educating the participants about becoming more sensitive about their thoughts, emotions, and experiences (Morris 2025). Such heightened level of self-awareness makes individuals all the more attentive to the demands of diabetes management which is typically accompanied by lifelong surveillance and self-care. A second significant application of mindfulness is to reduce the emotional response to stress, which has been noted to play a significant role in the treatment of chronic disease. Previous researches have constantly shown that mindfulness-based interventions can lead to the positive outcome of diseases particularly where

the stress management component is of paramount importance in determining health (Ramirez-Duran 2025). This study suggests that yoga would be an appropriate form of people with diabetes because mindfulness would significantly improve, and they would become more responsive to the needs of their bodies, as well as they would be more in control of their condition.

The cultural value of the practice as it is understood in the qualitative data also increases the therapeutic value of yoga. The participants in the present study stated that their attachment to the cultural and spiritual character of yoga was very strong and this provided them with some sort of mean and end to what they were undertaking. This observation brings out the need to ensure that there is integration of the cultural heritage of yoga in the contemporary health practices. Yoga is a physical practice; nevertheless, according to Black (2023) and Konecki et al., yoga may be viewed as spiritual and philosophical practice, which is a holism of well being. The healing power of yoga can be enhanced by cultural background of yoga which increases a sense of belongingness and belonging to the world and ourselves. This opinion is aligned with the study by Desai (2025) who underlines that cultural heritage of yoga must be respected when the latter is employed as a treatment aid because it will make this practice more legitimate and efficient.

Moreover, the results of this study demonstrate that it is necessary to address yoga in terms of the cultural sensitivity and respect with regard to its application in contemporary healthcare institutions. Though the physical component of yoga has been familiar, the cultural and spiritual components of the practice have tend to be ignored in the westernized versions (Kalyanasundaram 2024). Nonetheless, this article shows that the ultimate gains of yoga are only realized when yoga devotees embrace its culture especially in relation to sentimental and psychological health. According to O'Brien-Kop (2021), the cultural aspects of yoga do influence to bring a more profound understanding of the connection between the mind and the body, which will greatly empower the therapeutic impact of yoga. The research participants who have observed the cultural aspect of yoga have reported that the experience is richer and more satisfying and cultural sensitivity should be considered one of the primary characteristics of a yoga-based health intervention.

The research findings also show that yoga can be considered an implementation tool that can be applied long-term to manage diabetes, particularly when used in combination with other lifestyle interventions. The intervention was 12 weeks long, but the results of radical changes in physical and psychological health parameters suggest that yoga has a potential long-term effect, particularly, the development of self-control and emotional stability. Further longitudinal research is required to investigate the further influence of the yoga technique on the management of diabetes in particular in the maintenance of the blood sugar levels and complication risks (Prendergast 2021). The positive effects of yoga on mind and emotional control could never be ignored particularly because it might assist diabetic individuals to cope with the changes posed by a long-term condition in their lives.

The research is affirmative, yet is limited in some respects. Although it is beneficial to test hypothesis, use of the synthetic data could not represent the complexities and real-life data. Within a clinical practice, participants would respond to yoga differently in circumstances where they are facing other health problems or other personal issues. Additionally, the intervention is quite constrained in relation to time hence the effect of yoga in the long term on the management of diabetes is not known. Future studies should consider including additional participants and a longer period of intervention to establish the effectiveness of yoga in the long-term.

The paper contributes to a list that keeps growing with studies on yoga as a multidimensional intervention to manage Type 2 diabetes. The findings demonstrate the usefulness of yoga in improving physical state of wellness, such as the level of blood sugar, and mental state with reduced levels of stress, anxiety, and depressed mood. The other thing that the study reveals is the cultural value of yoga which includes inclusion of therapeutic effects of the practice through supporting emotional and spiritual wellbeing. The holistic approach to yoga can be adopted to supplement the conventional management of diabetes and to improve the quality of life of individuals living with this chronic complication.

CONCLUSION

The study shows that yoga has a titanic potential in the use of the technique as a holistic intervention in the management of Type 2 diabetes and has its positive impacts in the body and psyche. These radical changes in the fasting blood glucose and HbA1c reflect the potency of yoga in the enhancement of glycemic control, which is an important feature of self-management in diabetes. Besides the physical advantages, the study also revealed that the stress, anxiety, and depression rates improved considerably, mindfulness, and yoga implementation in controlling emotions and mental well-being. These are consistent with the literature available that continues to advance the idea that yoga is a powerful weapon in the fight against, but not only the physiological, but the psychological aspects of chronic disease. Moreover, the study serves to emphasize the importance of maintaining the cultural aspect of yoga within the contemporary health interventions and how the spiritual and philosophical background of yoga can be used to increase its therapeutic effectiveness. By integrating the elements of cultural dimensions of yoga, this research study contributes to the gradual understanding of the fact that yoga as a physical exercise is not only a type of exercise but a whole body, emotional, and mental health promotion method. Although the short-term intervention of the study had positive outcome, future studies involving wider population and lasting intervention would be desired to affirm the results and ensure long-term impact of yoga on the management of diabetes. In addition, in-test clinical trials are needed to confirm the relevance of the results of the synthetic dataset in this study. Overall, yoga has the potential to be an excellent addition to standard diabetic management, and improve physical health, and quality of life, and the emotional and psychological pitfalls of living with chronic illness which is why yoga needs to be an alternative part of diabetes management protocols.

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