

## Original Research Article

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# Musculoskeletal Discomfort (MSD) Faced by Women Engaged in Mithila Painting: an Exploratory Investigation

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## ABSTRACT

India has a rich storage of art. From the traditional to the contemporary, India is fast budding itself as a key intention for those who love art. India is distinct from its rich traditional heritage of Tribal/Folk Arts and Culture. The current study was conducted in the Madhubani district of Bihar. A sample of 60 respondents were selected from the Mithila region for the field study, who labor 4-6 hours a day for Madhubani painting or Madhubani art. The present study was aimed at measuring musculoskeletal discomfort and severity of pain. The study's findings showed that the majority of respondents 61.67 percent experienced severe pain during Mithila painting, while 56.66 percent women reported experiencing musculoskeletal discomfort. Correlation analysis further revealed a significant positive relationship between age and both musculoskeletal discomfort and severity of pain.

**Keywords:** India, Traditional, Heritage, Arts, Folk, Culture, Mithila painting, Madhubani art and musculoskeletal discomfort.

## INTRODUCTION

Work-related musculoskeletal disorders (MSD) are common among numerous occupations in both developed and developing countries. The effect of MSD is quite enormous and is considered a work-related disease that is eligible for compensation in various developed countries. Given this, it was predicted that the increasing number of MSD particularly in developing countries is evidenced by the rising number of cases.[2] Mithila painting, also known as Madhubani painting, is an ancient art form that originated in the Mithila region of the Indian subcontinent.[4] It is characterized by intricate and vibrant designs depicting scenes from everyday life, nature, and Hindu mythology. The women who practice this art form often sit in a fixed position for long hours, using fine brushes and natural dyes to create these detailed paintings. As a result, many of them experience musculoskeletal discomfort, particularly in their back, neck, and shoulders. Women in the Mithila region have been practicing this art form for centuries, passing down intricate techniques and traditional designs from generation to generation. Mithila painting is celebrated for its cultural and artistic contributions, the physical demands of the craft are often overlooked. The repetitive nature of painting, along with extended periods of sitting or bending, can lead to musculoskeletal issues among practitioners. Given that women predominantly engage in this art form, it's crucial to understand the extent of MSD they experience and identify the contributing factors. By exploring the prevalence and nature of MSD in this specific context, we aim to raise awareness about the health risks associated with traditional art practices and suggest

ergonomic solutions to mitigate these risks. This study is essential not only for preserving the cultural heritage of Mithila painting but also for ensuring the well-being of its practitioners.

## METHODOLOGY

Ex-post-Facto research design was used in the present study.[6] The present study was conducted in Madhubani, district of Bihar and Madhubani district was selected purposively because its administrative headquarters are located in Madhubani. The district has an area of 3,501 square kilometres and highest number of Mithila painting practitioners present in that area. Out of twenty-one blocks in Madhubani district two block were selected purposively, Rahika and Rajnagar where maximum number of women artists were working in Mithila Painting. There are seventy-five villages in Madhubani district. Out of which two villages Saurath and Ranti chosen purposively where maximum number of women artists were working in Mithila Painting. From the selected village 30 women were randomly selected from each village thus total 60 respondents were selected for this study. The investigator himself collected the data from the respondents with the help of pre-tested interview schedule. The collected data were analyzed by using appropriate statistical tools procedures to determine the frequency, percentage, mean, standard deviation, mean percentage score and correlation coefficient (r).

## RESULTS AND DISCUSSION

Musculoskeletal Discomfort as are the problem which are connected to muscles and other joint pain and increases with age and other serious health issues the data displayed in Table 1 indicates that 56.66 percent women experienced musculoskeletal discomfort during Mithila painting followed by 23.34 percent experienced low discomfort and 20.00 percent women's were experienced high discomfort during Mithila painting. It may be concluded that more than of 75.00 percent working labor experienced medium to high discomfort issues

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due to less awareness of ergonomic risk and work in awkward positions for long hours, which prompts postural discomfort and various musculoskeletal issues.[1] A study also indicated that women experienced high musculoskeletal discomfort Mithila painting [5][8]

**Table 1. Distribution of respondents based on musculoskeletal discomfort faced by respondents (n=60)**

S. No.	Category	Frequency	Percentage
1	Low Discomfort (< 47.45)	14	23.34
2	Medium Discomfort (47.45- 84.14)	34	56.66
3	High Discomfort (> 84.14)	12	20.00

**Table 2. Relationship of musculoskeletal discomfort with selected independent variables (n=60)**

Variables	'r' value
Age	0.221*
Education	0.141 <sup>NS</sup>
Income	0.172 <sup>NS</sup>

\*Correlation is significant at the 0.05 level

<sup>NS</sup>= Non-significant

The data in Table 2 show that, according to the correlation coefficient (r) analysis, age was positively and strongly connected with musculoskeletal discomfort at the 5 percent level of significance, indicating a strong relationship between age and musculoskeletal issues. However, other independent variables like education and income were not found relationship with musculoskeletal discomfort.

**Table 3. Distribution of respondents based on severity of pain faced by respondents (n=60)**

S. No.	Category	Frequency	Percentage
1	Low Discomfort (< 47.45)	13	21.66
2	Medium Discomfort (47.45- 84.14)	37	61.67
3	High Discomfort (> 84.14)	10	16.67

Table 3 reveals that more than 61.00 women-percent of experienced severity of pain during Mithila painting followed by 21.66 percent were faced less pain and 16.67 percent respondents were faced high severity of pain during traditional painting of Mithila. It may be concluded that maximum of 78.34 percent working women faced medium to high severity of pain due to age increases; pain in various body parts also increases. The reason behind that the persisting pain was not taken care of during initial stages and this may have transformed into chronic pain as age increased. A study indicates similar findings that majority of women experienced severity of pain during Mithila painting.[3][7]

**Table 4. Relationship of severity of pain with selected independent variables (n=60)**

Variables	'r' value
Age	0.224*
Education	0.0189 <sup>NS</sup>
Income	0.183 <sup>NS</sup>

\*Correlation is significant at the 0.05 level

<sup>NS</sup>= Non-significant

The 'r' value obtained from correlation coefficient whereas the data presented in Table 4 reveals that age has a strong and significant relationship with the severity of pain at 0.05 percent level of significance, which means age has a strong relationship with the severity of pain. However, other independent variables like education and income were not found relationship with the severity of pain.

## CONCLUSION

The study conducted in the Madhubani district of Bihar, focusing on women engaged in Mithila painting, The results indicate that a significant proportion of respondents experience musculoskeletal discomfort and severity of pain due to their work. Specifically, 76.66% of the women reported medium to high discomfort, and 78.34% experienced medium to high severity of pain. The primary factors contributing to these issues are prolonged awkward postures and lack of ergonomic awareness. Correlation analysis further revealed a significant positive relationship between age and both musculoskeletal discomfort and severity of pain, highlighting that older women are more susceptible to these problems. Other variables such as education and income did not show a significant correlation.

These findings underscore the need for ergonomic interventions and awareness programs to alleviate health issues among Mithila painting practitioners.

## Future scope of the study

This kind of profession also inspires people to think creatively, which indirectly aids in supporting cultural arts and crafts. There is an obligation to examine possibilities for this art form's retention to other artistic media. Programs to train, treat, and prevent women from acquiring musculoskeletal problems.

## Conflicts of Interest

All authors declare that they have no conflict of interest

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