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Research Article

Stress Prevalence

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Comparative Analysis of Stress Prevalence among Married and Unmarried Female Doctors: A Comparative cross-sectional study

Mansi[1*], Verma RK[2], Dabas A[3]

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[1*] Mansi, Post Graduate Scholar, Post Graduate Department of Swasthavritta, Ch Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, New Delhi, India.

[2] Rakesh Kumar Verma, Associate Professor, Post Graduate Department of Swasthavritta, Ch Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, New Delhi, India.

[3] Ankit Dabas, MD Panchkarma, Ayurveda Medical Officer, Sonipat, Haryana, India.

This cross-sectional study investigated and compared stress prevalence among married and unmarried female doctors at Ch. Brahm Prakash Ayurved Charak Sansthan, New Delhi, using the Perceived Stress Scale (PSS). The study included 30 female doctors to assess the impact of marital status on stress levels. Results indicated no significant difference in stress levels between married and unmarried groups (p=0.977), suggesting that marital status does not significantly influence perceived stress in this population. Contrary to common assumptions about increased stress for married women balancing career and family, this study highlights the role of other factors such as job demands, social support, and individual coping mechanisms. Notably, a high proportion of doctors aged 26-30 were married, yet stress levels remained similar across marital statuses. Unmarried doctors may experience distinct stressors, including lack of emotional support and societal pressure. The study's findings suggest a complex interplay of factors influencing stress in female doctors, beyond just marital status. Further research is needed to explore the influence of work experience, department-specific demands, and work shifts on stress levels in this population.

Keywords: Stress, Married Female doctor, Unmarried Female doctor, Cross-sectional study

Corresponding Author

Mansi, Post Graduate Scholar, Post Graduate Department of Swasthavritta, Ch Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, New Delhi, India.

Email: mansituti365@gmail.com

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Introduction

Stress can be defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives.[1] It is a physiological and psychological reaction to events that are seen as challenging or frightening. Stress triggers the body's "fight or flight" response, which releases chemicals such as adrenaline and cortisol to prepares it to deal with the perceived threat.[2] Short-term stress can be beneficial in risky situations, but persistent stress can have a negative impact on physical and mental health. Chronic stress can exacerbate pre-existing health issues and can increase the consumption of alcohol, tobacco, and other substances. Stressful situations can also induce or worsen mental health issues, most notably anxiety and depression, necessitating access to medical care. Workplaces have a significant impact on an individual's mental health, with good working conditions helping by providing a livelihood, structure, purpose, and opportunity for social interaction. However, a terrible work environment—characterized by heavy workloads, discrimination, a lack of authority, or job insecurity poses considerable dangers to mental health. This is especially concerning for healthcare professionals, particularly female doctors, who frequently encounter specific pressures owing to the demanding nature of their employment.[3] The prevalence of mental health disorders in working-age adults highlights the seriousness of workplace stress. In 2019, 15% of adults were estimated to have a mental disorder, and globally, 12 billion working days are lost annually due to depression and anxiety, resulting in a financial burden of nearly US$ 1 trillion in lost productivity.[4] The healthcare sector, where female doctors are overrepresented in frontline roles, exemplifies the challenges of balancing heavy workloads with long, irregular hours, a lack of control over work schedules, and job insecurity, all of which exacerbate stress levels.[5] Data shows that stress tends to affect women more than men. A survey by the American Psychological Association (APA) in 2021 found that women reported higher stress levels (5.0 on a scale of 1 to 10) compared to men (4.0 on a scale of 1 to 10). Research also suggests that women may experience more significant emotional and psychological responses to stress, Making the m more vulnerable to conditions like anxiety and depression.[6] The rising incidence of stress among healthcare professionals, in addition to the added duties and social pressures married women experience, highlights the urgent need for a thorough understanding of the variables influencing the prevalence of stress in female physicians, married or single. For instance, when compared to other occupations, doctors reported higher levels of stress and burnout.[7],[8] Even though female doctors deal with a variety of stressors, their marital status may have a big impact on how they feel about them. On the other hand, single women could have particular difficulties like isolation, unstable financial status, and social pressure related to marriage and relationship, all of which can lead to stress. There isn’t much research done on comparative study on the stress levels of married and single female doctors, despite the increasing awareness of the significance of mental health in the healthcare sector. This study attempts to close this knowledge gap by carrying out an extensive examination of the prevalence of stress in these two groups. Through an awareness of the unique pressures and coping strategies faced by female physicians across various marital situations, we may create focused interventions, networks of support, and legislative initiatives to enhance their mental well-being and adaptability. The findings of this study have significant implications for both healthcare providers and the communities they serve. We can create practical solutions to reduce these stresses and enhance the general wellbeing of female doctors by recognizing the elements that contribute to stress in this population.

Aim and Objectives

Aim

To investigate and compare the prevalence of stress among married and unmarried female doctors in order to gain insights into the factors contributing to stress.

Objective

1. To assess the overall prevalence and severity of stress among married and unmarried female doctors through questionnaire.
2. To explore the relationship between marital status, work-related factors and stress prevalence among female doctors.

Materials And Methods

Consent: Before the Patient was included in the trial, written consent will be taken.

Study Location: Study will be conducted at Ch. Brahm Prakash Ayurved Charak Sansthan (CBPACS). Choice of CBPACS is based on its large pool of female doctors, making it a suitable location for conducting this research.

Study Population: Female doctors working at CBPACS. This target population ensures that the participants are directly relevant to research question and provide a homogeneous group for comparison.

Study Design: A cross-sectional study design will be employed in this research. This design involves collecting data from a group of individuals at a single point in time, allowing for a snapshot of stress prevalence and related factors among married and unmarried female doctors at CBPACS.

Type of Study: It will be an observational study, meaning that researchers will observe and collect data without intervening in the participants lives. This approach allows for a natural assessment of stress levels and related variables.

Study Tool: Perceived Stress Scale (PSS) will be used as the primary tool for measuring stress levels in the study participants. The PSS is a widely validated 10-item questionnaire that assesses the perception of stress over the past month. It has been shown to be reliable and valid for measuring stress in various populations, including healthcare professionals.

For each question choose from the following alternatives:

0 - never 1 - almost never 2 - sometimes 3 - fairly often 4 - very often

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and stressed?
4. In last month, how often have you felt confident about your ability tohandle your personal problems?
5. In the last month, how often have you felt that things were going your way?
6. In the last month, how often have you found that you could not cope with all the things that you had to do?
7. In the last month, how often have you been able to control irritations in your life?
8. In the last month, how often have you felt that you were on top of things?
9. In the last month, how often have you been angered because of things that happened that were outside of your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Figuring Your PSS Score

You can determine your PSS score by following these directions:

First, reverse your scores for questions 4, 5, 7, and 8. On these 4 questions, change the scores like this:

0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.

Now add up your scores for each item to get a total.

- **My total score is _____.**

Individual score on PSS can range from 0 to 40 with higher scores indicating higher perceived stress.

- Scores ranging from 0-13 would be considered low stress.
- Scores ranging from 14-26 would be considered moderate stress.
- Scores ranging from 27-40 would be considered high perceived stress.

The Perceived Stress Scale is interesting and important because your perception of what is happening in your life is most important. Consider the idea that two individuals could have the exact same events and experiences in their lives for the past month. Depending on their perception, total score could put one of those individuals in the low stress category and the total score could put the second person in the high stress category.

Data Collection

Primary data will be collected directly from study participants through self-administration of PSS. This method ensures that data is collected from individuals themselves, providing firsthand information about their stress levels & experiences.

Study Period

The study period is estimated to be four months, allowing for sufficient time for participant recruitment, data collection, and analysis.

Sample Size

A sample size of 30 female doctors is planned for this study. While a larger sample size would ideally be preferred, the limitations of time, resources, and the availability of eligible participants may necessitate a smaller sample. However, a sample of 30 is considered adequate for conducting this type of research.

Mode of Sample Selection

Convenience sampling will be used to recruit participants for this study. This method involves selecting individuals who are readily available and willing to participate. While convenience sampling may introduce potential biases, it is a practical approach for conducting research in a limited timeframe and with limited resources.

Assessment Criteria

The score obtained through Perceived stress scale of all participants will be assess and analyze. some other factors like work shift, number of children, specialization and years of experience will also be taken in consideration.

Data Analysis

Table 1: Data analysis of both group

Unpaired t test		N	Mean	S.D.	Mean difference	t value	p value
PSS score	Married	15	21.733	6.724	-0.067	-0.029	0.977
	Unmarried	15	21.800	5.955			

Insights:

Statistical Significance:

- A p-value of 0.977 is considerably higher than the common significance level of 0.05. This suggests that there is no statistically significant difference between the PSS scores of married and unmarried females in this sample.

Interpretation of Mean Difference:

- The mean difference of -0.067 indicates that married females report slightly lower perceived stress scores than unmarried females, but the difference is negligible and not statistically significant.

Possible Inferences:

Lack of Evidence for Difference:

- The results imply that marital status may not have a significant impact on perceived stress levels among females in this sample. Both groups exhibit similar levels of stress as indicated by their mean scores.

Further Research:

- To draw more definitive conclusions, further research with a larger sample size or additional variables might be necessary. Factors such as age, socioeconomic status, or support systems could also be examined to understand their influence on perceived stress. (figure 1)

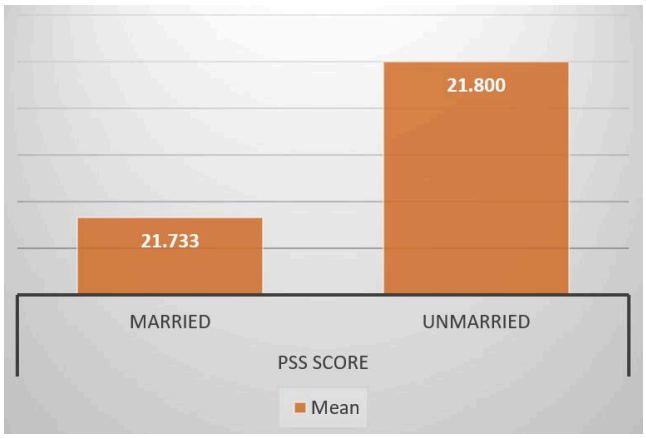

Figure 1: Graphs showing mean value of both groups

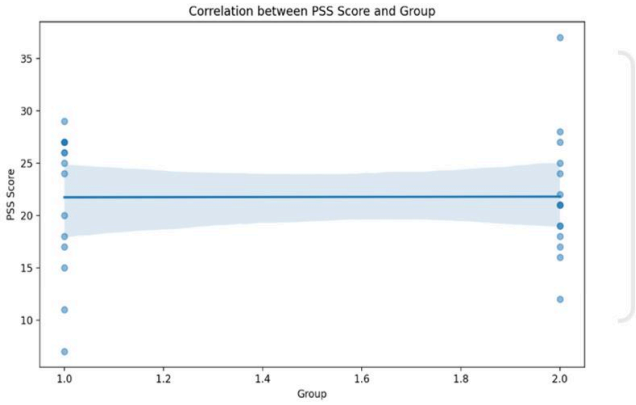

Figure 2: Correlation between PSS score and group

Correlation coefficient between PSS Score and Marital status using the point-biserial correlation: 0.0054

The scatter plot and correlation coefficient (0.0054) indicate a very weak, almost non-existent correlation between PSS Score and Group.

This suggests that the group assignment doesn't significantly influence the PSS Score. (figure 2)

Result

The results of the study indicate that marital status does not have a significant impact on the perceived stress levels among female doctors in the sample. Both married and unmarried female doctors exhibit similar stress levels, with a mean difference of -0.067, suggesting that married females report slightly lower stress scores than their unmarried counterparts. However, this difference is negligible and statistically insignificant, as indicated by the high p-value of 0.977, well above the significance threshold of 0.05. This lack of statistical significance suggests that other factors, beyond marital status, may contribute to stress among these individuals.

Discussion

The research titled "Comparative Analysis of Stress Prevalence among Married and Unmarried Female Doctors: A Cross-Sectional Study" shows that being married or unmarried does not significantly affect stress levels in female doctors. Both groups report similar stress levels based on their average scores. This finding goes against common beliefs that married women, especially those in medicine, face more stress due to family duties and caregiving. Instead, the study suggests that stress is influenced by various factors, including job demands, relationship dynamics, and social support, which affect both married and unmarried doctors similarly. **[9]**

Stress and Marital Status: A Complicated Link

Psychological theories often suggest that married people, especially women in highpressure jobs like medicine, face more stress because they juggle work and home responsibilities. Family issues, childcare, and work-life balance are usually seen as major stress factors for married doctors.**[10]** However, this study challenges that idea, showing that marital status might not be the only reason for stress among female doctors[11]. The research indicated that stress levels for married and unmarried female doctors were nearly the same, with no significant difference found. This implies that factors not related to marriage could have a bigger impact on the stress levels of female doctors.

Age and Marriage Trends in the Sample

A significant finding from the study is that 86.7% of people aged 26-30 are married, the highest rate among all age groups. In contrast, only one person aged 21-25 is unmarried. This indicates that most female doctors in this group tend to marry in their late twenties, likely while they are working on their postgraduate medical degrees. Interestingly, even with this high marriage rate in their late twenties, the stress levels of both married and unmarried doctors are similar. This goes against the idea that marriage during such a challenging career phase would lead to higher stress. The findings imply that other factors, like job pressures, may play a bigger role in stress levels than being married. Out of the 15 married respondents, only 5 had children, which might explain the lack of a significant difference in stress levels between married and unmarried respondents. Newly married doctors, who comprised a substantial portion of the sample, may not yet be dealing with the full extent of stress associated with family responsibilities, such as childcare or managing household dynamics, which could account for the similar stress levels observed between the two groups. It is important to consider that, as these newly married doctors progress in their personal and professional lives, they may begin to experience higher levels of stress as they take on more familial responsibilities. Studies such as those conducted by Gail Erlick Robinson (2003) emphasize that women physicians often face dual stressors from their demanding careers and their roles as primary caregivers in the family.**[12][13]**

Unmarried Female Doctors: Distinct Stress Factors

Unmarried female doctors in this study encounter specific stress factors that differ from those faced by their married peers. A significant issue identified is the lack of emotional support that many unmarried doctors experience. Without a family support system to turn to after long shifts, these doctors may feel more stressed, even if they do not deal with family-related pressures like married doctors do.**[14]** Additionally, unmarried doctors may feel societal pressure to marry and settle down, especially in cultures where marriage is viewed as a key life goal.**[15]** This pressure, along with the demands of a medical career, can add to the stress levels in this group.

These elements help clarify why stress levels among married and unmarried doctors can be similar, despite the different sources of stress they each face.**[16]**

One important factor that might have affected study's results is the characteristics of the sample. The sample included an equal number of married and unmarried female doctors (15 of each), with most participants coming from *Swasthavritta* department. This focus on a specific department, due to convenience sampling, could limit how widely findings can be applied. Furthermore, department may influence stress levels of doctors, as different medical fields have varying demands, schedules, and stress factors. Data shows that *Swasthavritta* has most married and unmarried doctors, while departments like *Kaya Chikitsa* and *Roga Nidan* had no married participants. This difference in marital status among departments might indicate varying expectations for work-life balance or cultural norms in each field. For instance, departments with more patient contact or emergency responsibilities may create more stress for doctors, regardless of their marital status. However, since most participants were from *Swasthavritta*, which may be less demanding than other specialties, this could explain why stress levels were similar for both married and unmarried doctors.

Career Stage and Experience as Stress Factors

Another significant finding is the potential correlation between work experience and marital status.**[17]** The study shows that individuals with no work experience are more likely to be married, while those with 1 year of experience are predominantly unmarried. This suggests that early career doctors may prioritize establishing their careers over marriage, which could influence their stress levels.**[18]** Despite these differences in work experience and marital status, the stress levels between married and unmarried doctors remained consistent. It is possible that doctors with no work experience, who are also married, may have stronger support systems at home, which helps buffer the stress associated with starting a new career. In contrast, unmarried doctors who are just beginning their professional journeys may face higher levels of stress due to the pressure to prove themselves in a competitive work environment, coupled with the lack of emotional support from a partner or family.

This could explain why stress levels are similar between the two groups, despite their differences in career stage and marital status.**[19]**

Shift Work and Marital Status

The information shows a possible link between work shifts and marital status. About 60% of married doctors work day shifts, while 53.3% of unmarried doctors choose rotational shifts. This suggests that married doctors might prefer stable schedules to fit family life, whereas unmarried doctors may be more open to flexible hours. Despite these different work patterns, stress levels are similar for both groups. Married doctors may favor day shifts to maintain a better work-life balance, especially if they have children or family duties. In contrast, unmarried doctors might feel the need to take rotational shifts to boost their careers or handle more tasks, which could lead to higher stress. The similar stress levels indicate that both work schedules have their own challenges, no matter the marital status.

Statistical Insights and Implications

The study's statistical data highlights several key trends related to age, marital status, department, and work experience. These include:

- 7% of individuals aged 26-30 years are married, suggesting that the majority of doctors get married in their late twenties.
- There is a balanced representation of married and unmarried doctors in the sample, with 15 married and 15 unmarried respondents.
- *Swasthavritta* has the highest number of both married and unmarried individuals, indicating that this department may be more representative of the overall sample.
- 8 married doctors had no work experience, indicating that many newly married doctors may still be in the early stages of their careers.

These statistical insights suggest that marital status is not a defining factor in stress levels, but rather that stress is influenced by a combination of factors, including work demands, emotional support, societal pressures, and personal coping mechanisms.

Conclusion

In conclusion, this study provides a nuanced understanding of stress prevalence among married and unmarried female doctors.

While basic psychological theories suggest that marriage increases stress, particularly for female professionals, this study demonstrates that marital status alone does not determine stress levels. Unmarried doctors face their own set of stressors, such as isolation, societal pressure to marry, and career-related stress, which may balance out the family-related stress experienced by married doctors. The findings also highlight the importance of considering work experience, department, and work shifts when analyzing stress levels in healthcare professionals. Future studies should explore these variables in more detail to better understand the complex interplay of factors that influence stress among female doctors.**[20]**

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