



Comparative Analysis of Adjustment Problems of Reproductive-Age Women with Regular and Irregular Menstrual Cycles

Iram Naz¹, Zainab Ghous², Aima iftikhar³ & Sana Munair⁴

¹Assistant Professor, Department of Psychology, University of Gujrat, Email: iram.naz@uoq.edu.pk

²Student, Department of Psychology, University of Gujrat, Email: zainabzafar019@gmail.com

³Student, Department of Psychology, University of Gujrat, Email: aimaiftikhar17@gmail.com

⁴Student, Department of Psychology, University of Gujrat, Email: sabihamengal1@gmail.com

ARTICLE INFO

Article History:

Received: January 21, 2025
Revised: February 27, 2025
Accepted: March 16, 2025
Available Online: March 25, 2025

Keywords:

Menstrual Cycles, Reproductive-Age

Corresponding Author:

Iram Naz

Email:

iram.naz@uoq.edu.pk



ABSTRACT

The current research aimed to investigate the comparative levels of adjustment issues specifically of reproductive age women with both regular and irregular cycles. A Comparative Cross-sectional Research Design was employed for this investigation. A sample of 200 female adults aged 19 or older was obtained from several different cities through a snowball sampling process. Demographic information along with an adjustment problem scale was gathered from the sample. Descriptive statistical analysis and Independent Sample T-tests were used to analyze the data. According to the findings, a significant difference exists between women with irregular menstrual cycles and those who have regular cycles: Irregular menstrual cycle subjects indicated a significantly higher level of Adjustment Problems compared to women with regular cycles (Mean of Irregular cycles =81.80 vs Mean of Irregular cycles =77.94). The difference demonstrated statistical significance ($t(137.87) = -2.16, p = .033$) thereby confirming a linkage between having an irregular menstrual cycle and having an increased chance of having Adjustment Problems in the psychological domain. The overall conclusion is that women of reproductive age who have irregular cycle(s) will be experiencing a much greater level of adjustment problem(s) than women who have regular menstrual cycles.

Introduction

Medical professionals are now recognizing the menstrual cycle as the "fifth vital sign" (Bouchard et al., 2023). It provides a significant understanding of a woman's overall and reproductive health.

The regularity of the menstrual cycle indicates the normal function of the hypothalamic-pituitary-ovarian (HPO) axis; the HPO axis is critical to a woman's physical and mental well-being.

Cycle Length Variability and Prevalence

There is a large amount of variability in cycle length (irregular and regular cycles), especially among adolescents, across all populations of women of reproductive age. Variations in cycle length are a problem globally. An estimated 14%-25% of women of reproductive age throughout the world experience irregular menstrual cycles (Attia et al. 2023). A significant percentage of women in the South Asian region have irregular cycles, with reports indicating a high level of irregularities among university-aged females (33.4% among undergraduate females), as well as a broad range of prevalence generated within multiple studies conducted in Nepal and India (35.7% to 64.2% reported across several studies) (Mittiku et al. 2022).

Importance and Awareness

Menstrual regularity is not only important for fertility, but is also critical to physiological, emotional and psychological well-being. There is consistent awareness in the literature that irregularities in menstrual cycles may indicate the presence of underlying problems (psychological stress, lifestyle factors (poor sleep, physical inactivity)), and/or medical conditions (Negi et al., 2018).

Definition of Regular Menstrual Cycle

A regular menstrual cycle is defined by the following parameters:

- **Frequency:** Every 24 to 38 days (Harlow & Campbell, 2004).
- **Duration:** Bleeding lasting 8 days.
- **Regularity/Consistency:** Variation in cycle-to-cycle length less than +/- 9 days (Mittiku et al., 2022; Owen, 1975).

Irregular Cycles and Their Causes

Irregular menstrual cycles are those that significantly deviate from the above parameters, such as the following:

- **Polymenorrhea:** Occurrence of menstrual cycles less than 24 days apart.
- **Oligomenorrhea:** Occurrence of menstrual cycles greater than 38 days apart (Harlow & Campbell, 2004).
- **Inconsistent length:** Length of cycle varies more than +/- 9 days between the shortest and longest cycle (Mittiku et al., 2022). Irregular menstruation may be an indication of a hormonal imbalance, stress, or problems with reproductive health. Some of the major factors that contribute to irregular menstruation include:
- **Polycystic Ovary Syndrome (PCOS):** It is a common endocrine disorder affecting approximately 6% to 13% of women of reproductive age worldwide, and is one of the leading contributors to irregular periods (Begum et al., 2024). Menstrual regularity is crucial not only for the potential for pregnancy. Women with regular menstrual cycles tend to be happier and healthier than those with irregular cycles, because they experience both physiological and emotional benefits of having regular menstrual cycles. A growing body of literature suggests that irregular menstrual cycles may indicate the presence of issues/depression, and/or that a

woman is experiencing high levels of psychological stress, modifiable lifestyle behaviours (e.g., lack of sleep, lack of exercise), chronic health problems, etc.... (Negi et al., 2018).

- **Stress:** The overall perception of high levels of psychological stress has been linked to increased chances of having irregular menstrual cycles (Negi et al., 2018).
- **Lifestyle Factors:** Conditions such as under-nutrition, extreme levels of exercise, and chronic illnesses (Harlow & Campbell, 2004).

This problem of irregular menstruation could result into number of problems the current study focus on adjustment problems.

Adjustment Problems

In the DSM-5, a New Category of Disorder has been created to reflect an Individual's Psychological Adjustment. Adjustment Disorder refers specifically to the emotional and behavioral responses of the individual to the identifiable, or 'recognizable', psychosocial stressors, which must occur within three (3) months following the first occurrence of the identified stressor(s), along with significant clinical impairment. Adjustment Disorder can also be diagnosed as Depressed Mood, Anxiety, Mixed Anxiety & Depressed Mood, Disturbance of Conduct; Mixed Disturbance of Emotions & Conduct; or Unspecified. Listed below are examples of Adjustment Disorder related psychological adjustments that are caused by depression, anxiety, mixed anxiety & depression, conduct disturbances, mixed emotional & conduct disturbances, or unspecified (American Psychiatric Association, 2013).

Adjustment can also be defined as the adaptive ability to effectively cope with day-to-day pressures, the emotional demands and social aspects of life, in order to maintain emotional balance and mental health. An adjustment to an environment that provides community, friendship, support, and a sense of belonging is needed to maintain mental health and a stable interpersonal environment. Hormonal changes and biological changes during the menstrual cycle affect a woman's emotional well-being and ability to make adjustments (Geer, 2023).

There has been extensive research that confirms a strong connection between having menstrual irregularities and experiencing emotional/psychological distress.

Few Comparative Studies: There is a scarcity of direct comparative studies rigorously analyzing the differences in adjustment profiles (emotional, social, and personal) between women with confirmed regular cycles and those with confirmed irregular cycles using comprehensive psychological adjustment scales. Menstrual disorders have been found through studies to correlate with significant increases in psychosocial (mental emotional, social) stress and difficulties in adjusting (Negi et al., 2018). The HPO (hormonal-pituitary-ovarian) axis is impaired when perceived stress is high. It results in menstrual irregularity and, conversely, menstrual irregularity adds to emotional distress as well as poor coping abilities (Elah Sadiqi & Salih, 2024).

Diminished Quality of Life (QoL), Negative Mood, and Poor Social Adjustment: Irregular cycles lead to a diminished QoL, negative moods (fatigue, tension, irritability), and poor social adjustment (Handy et al., 2022; Anjum & Jami, 2018). These demonstrate menstrual irregularity is an indicator of psychological imbalance and decreased adaptive capacity.

GAP in Research: Despite the established association, there is still a lack of research that compares direct comparisons of the adjustment profiles of women with confirmed regular cycles versus women with confirmed irregular cycles utilizing appropriately constructed psychosocial adjustment scales (reviewed literature). There is inadequate research that exists within South Asia

& specifically Pakistan that has incorporated evidence based study of menstrual ill structured variable verified between menstrual health and psychological domain adjustment other than menstrual health from outside geographical limitations (Anjum & Jami, 2018; Negi et al., 2018). Most research has focused on how symptoms (for instance pain/PMS) etc., effect an individual's capacity to be engaged across the full scope of adjusting across multiple domains when being managed under irregular cycles.

The need for this study is twofold:

1. To address the need for more context specific and original data in creating a better understanding of the relationship that is being created between psychological adjustments and the regularity of cycles in the context of South Asian and Pakistani culture.
2. To develop a better informed understanding of how department of mental health will provide mental health services and programs for women with irregular menstrual cycles and the diverse emotional, social and adaptive challenges they face as result of their menstrual health status.

Objective of the Study

To compare the adjustment problems of reproductive-age women with regular and irregular menstrual cycles

Research Methodology

Research Design

The current study employed a comparative cross-sectional research design for collection of data.

Participants

Adult reproductive-age women was the population of the study.

Inclusion criteria

According to inclusion criteria only adult women aged 19 years and above was included that experience menstruation.

Exclusion criteria

In exclusion adult women with any diagnosed mental health condition or health-related problems were not included in the study. Additionally, adolescent girls were excluded, women without menstruation or hormonal problems were also excluded from the study.

Sampling technique

Data was collected from adult women population from Gujrat, Lala Musa, and Kharian city using snowball sampling using Goggle form. Those females were taken who experience menstruation or reproductive-age women.

Measures

Demographic information of women gathered by a demographic form and psychological adjustment was measured by Scale of Adjustment Problems for Adults. The demographics provide details about age, education, marital status, family system, profession, number of children, weight, type of residence, number of menstrual cycles in a year, age of menarche, time snice getting married, duration of menstrual cycles, and socio-economic status of the women. Psychological

adjustment issues were evaluated through the Scale of Adjustment Problems for Adults Urdu-version that was in accordance with the adjustment disorder criteria (American Psychiatry Association, 2013). It consists of 48 items and three subscales (conduct, depression, and anxiety) on 3 point Likert (Naz et al., 2018). The convergent validity of the Scale was $r = .626^{**}$ and divergent validity was $r = .058$ with a reliability of .929 as determined by Naz et al. (2022) who identified that the cut-off score for the Scale is 71.

Procedure

The method for the selection of the participants for current research was snowball sampling. The data was collected using Goggle forms from different cities. A total of 200 women aged 19 and older were recruited into this sample group based on their reports of experiencing menstruation. Written as well as oral informed consent was also taken from reproductive-age women. The informed consent included detailed explanations of the aims of this study and the potential advantages of being involved in this research. Instructions were provided to the participating women asking them to read the questions carefully prior to providing an answer. It took 10 minutes to complete the scale.

Data Analysis

Statistical Package for the Social Sciences (SPSS, V 21.0) was operated to calculate the descriptive frequency and to run the independent sample t-test as per the objective of the study.

Result

The statistical analysis foresee the comparison of the adjustment problems of reproductive-age women with regular and irregular menstrual cycles

Demographic characteristics of women experiencing menstruation were described here. Most of the participants were single and aged 20-24 years. Women's majority had secondary school and master's level education. More than half of the women were unemployed, lived in urban areas and settled in extended family system. Most of the women weight between 41-50 kilograms followed by 51-60 kilograms. Approximately 50% of the women menstrual cycles last between less than 21 days or greater than 35 days. Mostly women number of cycles recorded was in range of 10-14 cycles per year. The majority of women's menarche started between the ages of 13-15 years. Most women are classified in middle socioeconomic status.

Table 1: Statistics for Duration of Menstrual Cycle and Adjustment Problems

Menstrual Cycle	N	Mean	SD	SE
21–35 days (Regular cycle)	104	77.94	7.95	0.78
<21 or >35 days (Irregular cycle)	96	81.80	15.76	1.61

Women with irregular menstrual cycle experience greater adjustment problems (Mean = 81.80, Standard Deviation = 15.76) compared to women with regular length cycle (Mean = 77.94, Standard Deviation = 7.95).

Table 2: Independent Samples t-Test Comparing Adjustment Problems across Menstrual Cycle Groups

Test	F	p (Levene's)	t	df	p (2-tailed)	Mean Diff.	SE Diff.	95% CI (Lower–Upper)
Equal variances assumed	55.54	.000	-2.21	198	.028	-3.86	1.74	-7.30 to -0.42
Equal variances not assumed	—	—	-2.16	137.87	.033	-3.86	1.79	-7.39 to -0.33

The equal variances assumption was checked with Levene's Test and reveals the homogeneity of variance was not met ($p = .000$). Therefore, equal variance not assumed row result will be interpreted. There was a significant difference found between the psychological adjustment problems of reproductive-age women with irregular and regular menstrual cycles. The mean difference of the two groups were 3.86 points suggests that irregular menstrual cycle was associated with more adjustment problems.

Discussion

In this investigation, it is shown that women who experience difficulty adjusting emotionally and/or psychologically due to having an irregular menstrual cycle are, on average, more emotionally distressed than someone who has a regular menstrual cycle. Specifically, women with irregular menstrual cycles reported having an average psychological adjustment score of 81.80 ($SD = 15.76$) while those with regular menstrual cycles reported having an average psychological adjustment score of 77.94 ($SD = 7.95$). The results of the t-test, which did not assume equal variances, were statistically significant ($t(137.87) = -2.16$, $p = .033$). The 3.86-point mean difference reveals that irregular menstrual cycles are associated with poorer emotional adjustment. The authors conclude that the findings of this study support the hypotheses outlined in the introduction that the menstrual cycle (or "fifth vital sign") is strongly associated with psychological and emotional well-being, as described by Bouchard et al. (2023), because irregular menstrual cycles indicate a loss of hormonal balance due to the functioning of the hypothalamic-pituitary-ovarian (HPO) axis, which can adversely affect the systems involved in regulating mood and responding to stress. Existing literature in both the medical and psychological communities provides substantial support for the conclusion that an irregular menstrual cycle contributes to psychological adjustment difficulties due to the dysregulation of the HPA (hypothalamic-pituitary-adrenal) axis and the resulting imbalance of sex hormones, including estrogen and progesterone. Past research has shown that chronic stress is related to irregular menstrual cycles (Negi et al., 2018). Stress can increase the secretion of cortisol, which can then lead to inhibition of gonadotropin-releasing hormones (GnRH) thus disrupting normal ovulatory patterns (Harlow & Campbell, 2004). Irregular cycles caused by variations in conditions such as polycystic ovary syndrome (PCOS) or extreme lifestyle changes can create a chronic state of unknown and fluctuating hormonal levels thus acting as an ongoing stressor and causing poor coping abilities and impaired adjustment (Handy et al., 2022). Estrogen and progesterone receptors are abundant in brain areas associated with emotion, mood, and cognitive functioning (De Bellis & Keshavan, 2003). Irregularities (i.e., not having normal progesterone levels) and chronic anovulation contribute significantly to mood dysregulation, anxiety, and depression, all of which lead to poor psychological adjusting (Elah Sadiqi & Salih, 2024). The adjustment scores of women having an

irregular menstrual cycle likely indicate higher rates of clinically recognized psychological issues, tribulation, and experience of lower quality of life (Anjum & Jami, 2018). Studies show that women with menstrual disorders (including oligomenorrhea) have higher rates of having symptoms of anxiety or major depressive disorders than women who have regular menstrual cycles (Anjum & Jami, 2018). While there are large gaps in social support available to women experiencing irregular menstrual cycles, there are particular circumstances in some cultures, including South Asia, where menstruation is so heavily stigmatized that these types of support are often absent. Irregular cycles, therefore, create emotional distress due to the constant uncertainty major women in these types of social environments face every month. In addition, the results of this study were important due to the high prevalence of irregular cycles present among women living in South Asia. Most participants in this study were young (20–24 years), lived in extended families, and were classified as being middle class. Therefore, it could be concluded that major adjustment difficulties due not only to economics and education. Instead, the adjustments may be strongly affected by the physiological disruption caused by irregular cycles and exacerbated by the restrictive or conservative social environment in which they may find themselves. Irregular cycles create high levels of emotional distress irrespective of an individual's social status; therefore, more local research is needed to focus on the contribution that irregular cycles create on mental well-being (Anjum & Jami, 2018).

Conclusion

The findings concluded that women with irregular menstrual cycle that is less than 21 days or more than 35 days encounter more psychological adjustment issues compared to women with regular cycle lengths. The findings indicate that irregular menstrual cycle leads to more noteworthy psychological and emotional problems. Regularity of menstrual cycle can easily enhanced women's overall adaptation and psychological wellness.

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