

A Comprehensive Study on the Perception of Menstruation Among Adolescent Boys: Examining Awareness, Parental Influence, Peer Interaction, Attitudinal Orientation, and Behavioral Sensitivity in the Socio-Cultural Context of Kanpur District

Abstract

Menstruation, though a natural biological process, continues to be surrounded by stigma and misconceptions, particularly among adolescent boys who are often excluded from menstrual discourse. The present study investigates the perception, awareness, and attitudes of adolescent boys toward menstruation in Kanpur district. Using a structured Likert-scale questionnaire comprising 50 items, data were collected from 100 respondents. The study employed descriptive and advanced statistical techniques, including mean score analysis, correlation, and regression, to examine relationships between awareness, family influence, peer influence, attitude, and behavior. The findings reveal that while boys demonstrate a relatively high level of behavioral sensitivity (Mean = 4.42) and positive attitudes (Mean = 4.08), their conceptual understanding remains moderate (Mean = 3.95). Family influence (Mean = 3.52) emerged as the weakest factor, indicating limited parental communication. Correlation and regression analyses show that attitude ($r = 0.72$; $\beta = 0.45$) and peer influence ($r = 0.63$; $\beta = 0.32$) significantly predict behavior, whereas family influence has a comparatively weaker impact. The results highlight that boys are willing to support and respect menstruating girls but lack comprehensive knowledge due to socio-cultural silence. The study concludes that inclusive education, peer-led awareness programs, and improved parental communication are essential to normalize menstruation and reduce stigma. Engaging boys in menstrual health discourse can significantly contribute to gender equality and a supportive social environment.

Keywords: *Menstruation, Adolescent Boys, Perception, Awareness, Gender Sensitivity, Peer Influence, Family Influence, Menstrual Stigma*

I. Introduction:

Menstruation, although a natural biological process associated with female reproductive health, remains a subject surrounded by silence, stigma, and cultural taboos in many societies, particularly in India. While significant attention has been given to understanding menstrual awareness and hygiene practices among adolescent girls, the perception of menstruation among adolescent boys has largely remained overlooked. This gap is critical, as boys constitute an integral part of the social environment that influences how menstruation is experienced, discussed, and normalized. The present study seeks to address this gap by focusing exclusively on the perceptions, understanding, and attitudes of adolescent boys toward menstruation, particularly in the socio-cultural context of Kanpur district. Adolescence is a formative stage of life during which individuals develop attitudes, beliefs, and social behaviors that often persist into adulthood. For boys, this phase is marked not only by physical and psychological changes but also by increasing interaction with peers and heightened curiosity about gender-related topics. However, menstruation is rarely included in the scope of knowledge imparted to boys, either within the family or in formal educational settings. As a result, boys' perceptions are often shaped by indirect exposure, fragmented information, and socio-cultural cues rather than by structured and scientific understanding.

One of the primary factors influencing boys' perception of menstruation is the culture of silence that surrounds the topic within families. In many households, menstruation is considered a private matter, discussed exclusively among female members. Boys are either deliberately excluded from such discussions or are discouraged from showing curiosity. This exclusion creates a sense of mystery and reinforces the notion that menstruation is something secretive or inappropriate for open conversation. Consequently, boys grow up with limited awareness and often develop misconceptions about the biological and social aspects of menstruation. Parental influence plays a significant role in shaping these perceptions, even in the absence of direct communication. Boys observe the behavior of parents, particularly how menstruating girls or women are treated within the household. In families where restrictions are imposed—such as prohibiting girls from entering kitchens, participating in religious activities, or engaging in normal routines—boys may internalize the idea that

menstruation is associated with impurity or weakness. These observations, though subtle, contribute to the formation of attitudes that may perpetuate stigma and gender inequality.

The level of understanding that parents themselves possess further affects how menstruation is perceived by boys. In households where traditional beliefs dominate, menstruation is often framed in terms of cultural norms rather than scientific explanations. Even when parents are educated, discomfort and hesitation in discussing reproductive health topics with male children persist. This lack of open dialogue prevents boys from acquiring accurate knowledge and reinforces reliance on alternative sources of information. In the absence of parental guidance, peer groups emerge as a primary source of knowledge for adolescent boys. Discussions among peers often occur in informal settings and may include humor, myths, and misinformation. Menstruation may be trivialized or misunderstood, leading to the development of negative or insensitive attitudes. Peer influence thus plays a crucial role in shaping collective perceptions, often amplifying existing misconceptions rather than correcting them. Curiosity is a natural aspect of adolescent development, and boys often exhibit a desire to understand topics related to gender and reproduction. However, when this curiosity is not addressed through appropriate channels, it can lead to confusion and the formation of incorrect beliefs. Some boys may perceive menstruation as a disease, injury, or abnormal condition due to lack of proper explanation. Emotional responses such as embarrassment, discomfort, or amusement are also common, reflecting the broader cultural context in which menstruation is treated as a taboo subject.

The impact of these perceptions extends beyond individual understanding to influence behavior toward girls. Boys who lack accurate knowledge are more likely to engage in teasing, stigmatizing, or discriminatory behavior toward menstruating girls. Such actions contribute to an environment of shame and exclusion, affecting girls' confidence and participation in daily activities, including education. On the other hand, boys who are informed and sensitized about menstruation tend to exhibit more empathetic and supportive behavior, highlighting the importance of awareness and education. Educational institutions have the potential to play a transformative role in shaping boys' perceptions of menstruation. However, in many cases, menstrual education is either limited or exclusively targeted at girls. The exclusion of boys from such programs perpetuates the cycle of ignorance and stigma. Teachers may also feel uncomfortable addressing the topic in mixed-gender settings, further limiting opportunities for boys to learn. Integrating comprehensive and inclusive menstrual education into school curricula is therefore essential for fostering a balanced understanding among adolescents. The socio-cultural environment of Kanpur district provides a relevant context for examining these issues. As a region characterized by a mix of urban, semi-urban, and rural populations, Kanpur reflects diverse cultural practices and levels of awareness. While urban areas may offer greater exposure to education and media, traditional beliefs and taboos continue to influence attitudes toward menstruation. Understanding boys' perceptions within this context is crucial for identifying gaps and designing effective interventions.

Media and digital platforms also contribute to shaping perceptions, although their influence is often indirect. While there has been a gradual shift toward more open representation of menstruation in recent years, the topic is still frequently portrayed with subtlety and euphemism. Boys may encounter information through advertisements, social media, or online content, but without proper guidance, such exposure may not translate into accurate understanding. The exclusion of boys from menstrual discourse reflects broader patterns of gender segregation and inequality. By framing menstruation as solely a women's issue, society limits opportunities for boys to develop awareness and empathy. This exclusion not only affects boys' understanding but also perpetuates stigma and reinforces discriminatory practices. Addressing this gap requires a shift toward inclusive approaches that recognize the role of boys in promoting menstrual health and dignity. The need to focus on boys' perception of menstruation is therefore both timely and essential. By examining the factors that influence their understanding—such as parental behavior, cultural norms, peer interactions, and educational exposure—it is possible to identify areas for intervention. Encouraging open communication within families, integrating boys into menstrual education programs, and promoting awareness through community initiatives can contribute to changing perceptions. The perception of menstruation among adolescent boys is shaped by a complex interplay of social, cultural, and familial factors. The lack of direct communication, combined with reliance on informal sources of information, leads to misconceptions and stigma. However, with appropriate education and inclusive practices, it is possible to transform these perceptions and foster a more supportive and equitable environment. Understanding boys' perspectives is a crucial step toward normalizing menstruation and promoting gender sensitivity in society.

Boys' Perception of Menstruation

The perception of menstruation among adolescent boys is a critical yet often neglected dimension of menstrual health discourse. In many societies, including India, menstruation is constructed as a gender-specific issue, leading to the systematic exclusion of boys from knowledge-sharing and discussions. This exclusion results in limited awareness, misconceptions, and the development of insensitive attitudes toward menstruation and menstruating girls. Boys' perceptions are not formed in isolation but are significantly influenced by family environment, parental understanding, observed behaviors, and peer interactions.

Influence of Parents on Boys' Perception

Parents play a fundamental role in shaping boys' initial understanding of menstruation. However, in most households, menstruation is not openly discussed with male children. Parents, particularly fathers, often avoid the topic entirely, while mothers may consciously exclude boys from conversations related to menstruation. This deliberate silence creates a knowledge gap, leading boys to perceive menstruation as a secretive or inappropriate subject. The absence of parental guidance often results in curiosity without clarity. Boys may become aware of menstruation indirectly through observation or fragmented information but lack a proper framework to understand it. Consequently, their perception is shaped more by silence and avoidance than by factual knowledge.

Parents' Understanding and Its Impact on Boys

The level of understanding that parents themselves possess about menstruation directly affects how boys perceive it. When parents hold traditional beliefs—such as considering menstruation impure or taboo—these attitudes are subtly transmitted to boys through behavior and household practices. For instance, if boys observe that menstruating girls are restricted from participating in religious or household activities, they may internalize the idea that menstruation is associated with impurity or inferiority. Even without explicit explanation, such practices communicate powerful messages that shape boys' perceptions. In contrast, parents with scientific and progressive understanding are more likely to normalize menstruation within the household. Although direct communication with boys may still be limited, the absence of discriminatory practices and the presence of respectful behavior toward menstruating girls contribute positively to boys' perception.

Observational Learning: Behaviour of Parents Toward Girls

Boys often learn about menstruation indirectly by observing how parents treat girls during their menstrual cycle. This observational learning plays a crucial role in shaping attitudes and beliefs. In households where girls face restrictions, isolation, or differential treatment during menstruation, boys may develop a perception that menstruation is a condition that necessitates separation or special control. Such observations reinforce gender stereotypes and contribute to the stigmatization of menstruation. Conversely, when parents treat menstruation as a normal biological process and do not impose unnecessary restrictions, boys are more likely to perceive it as a natural and acceptable phenomenon. Supportive and respectful behavior toward girls fosters empathy and reduces the likelihood of stigmatizing attitudes.

Lack of Direct Communication with Boys

One of the most significant factors influencing boys' perception is the lack of direct communication from parents. In many families, menstruation is discussed only among female members, leaving boys uninformed. This communication gap prevents boys from acquiring accurate knowledge and encourages reliance on alternative, often unreliable, sources. The use of indirect language, secrecy, and avoidance further complicates understanding. Boys may sense that menstruation is something that should not be talked about openly, leading to embarrassment and discomfort when the topic arises. This silence perpetuates the cycle of misinformation and stigma.

Peer Discussions and Informal Knowledge Formation

In the absence of parental guidance, boys often turn to peers for information about menstruation. Peer discussions become a primary source of knowledge, but these discussions are frequently characterized by myths, jokes, and incomplete information. Such informal exchanges can distort understanding and reinforce negative perceptions. Menstruation may be trivialized or ridiculed, leading to insensitive attitudes and behaviors toward girls. Peer influence thus plays a dual role—while it can spread misinformation, it also has the potential to shape collective attitudes among boys. When peer groups are exposed to accurate information, either through education or awareness programs, they can become platforms for positive change. Informed discussions among boys can challenge misconceptions and promote respectful behavior.

Curiosity, Misconceptions, and Emotional Responses

Boys' perception of menstruation is often characterized by curiosity combined with confusion. Due to limited access to accurate information, this curiosity may lead to the formation of misconceptions. Boys may associate menstruation with illness, injury, or abnormality, reflecting a lack of understanding of its biological basis. Emotional responses such as embarrassment, discomfort, or amusement are also common. These responses are shaped by the broader cultural context, which portrays menstruation as a taboo subject. Without proper guidance, boys may struggle to develop a balanced and informed perspective.

Impact on Behaviour Toward Girls

The perception that boys hold about menstruation significantly influences their behavior toward girls. Misconceptions and lack of awareness can lead to teasing, bullying, or social exclusion of menstruating girls. Such behavior not only affects girls' confidence but also reinforces stigma and gender inequality. On the other hand, boys who have a better understanding of menstruation are more likely to exhibit supportive and empathetic

behavior. They are less likely to engage in stigmatizing actions and more likely to contribute to a respectful social environment.

Role of Inclusive Family Practices

Inclusive family practices can play a transformative role in shaping boys' perception. When parents involve boys in age-appropriate discussions about menstruation, it helps normalize the topic and reduces stigma. Open communication fosters understanding and encourages boys to view menstruation as a natural biological process. Additionally, equitable treatment of girls during menstruation sends a strong message about gender equality. When boys witness fairness and respect within the household, they are more likely to adopt similar attitudes in their interactions with others.

Need for Parental Intervention in Shaping Boys' Perception

Given the significant influence of parents, there is a need for deliberate efforts to involve them in educating boys about menstruation. Parents should be encouraged to overcome cultural barriers and engage in open discussions with their children, regardless of gender. Awareness programs and educational initiatives can equip parents with the knowledge and confidence to address menstruation effectively. By fostering an environment of openness and acceptance, parents can play a key role in shaping positive perceptions among boys.

Research Objectives

The present study aims to explore and analyze the perception of menstruation among adolescent boys with specific reference to Kanpur district. The major objectives of the study are:

1. To examine the level of awareness and knowledge about menstruation among adolescent boys.
2. To analyze the role of parents in shaping boys' perception regarding menstruation.
3. To study the influence of parental behavior toward girls during menstruation on boys' attitudes.
4. To assess the extent of communication or discussion about menstruation within families involving boys.
5. To investigate the role of peer discussions in forming perceptions and misconceptions among boys.
6. To identify prevailing myths, misconceptions, and emotional responses of boys toward menstruation.
7. To evaluate how boys' perceptions influence their behavior toward menstruating girls.
8. To suggest measures for improving awareness and promoting positive attitudes among adolescent boys.

Need of the Study

Menstrual health has traditionally been considered a female-centric issue, resulting in the exclusion of boys from awareness programs and discussions. This gendered approach has created a significant gap in understanding, as adolescent boys remain uninformed or misinformed about menstruation. Such lack of awareness contributes to stigma, embarrassment, and negative behavior toward girls. In the Indian socio-cultural context, particularly in regions like Kanpur district, menstruation is often associated with taboos and restrictions. Boys, being part of the same social structure, internalize these norms without questioning them. Their perceptions are shaped by silence within families, limited educational exposure, and informal peer interactions. The need for this study arises from the recognition that boys play a crucial role in shaping the social environment in which girls experience menstruation. Without addressing boys' perceptions, efforts to improve menstrual health and hygiene remain incomplete. This study seeks to fill this gap by focusing specifically on adolescent boys, thereby contributing to a more inclusive approach to menstrual awareness.

Significance of the Study

The study holds both academic and social significance. Academically, it contributes to the limited body of research focusing on boys' perception of menstruation. Most existing studies emphasize girls' experiences, leaving a gap in understanding the male perspective. By addressing this gap, the study adds to the existing literature on adolescent health and gender studies. From a social perspective, the study is significant in promoting gender sensitivity and reducing menstrual stigma. Understanding boys' perceptions can help in designing inclusive educational programs that involve both genders. Such programs can foster empathy, respect, and supportive behavior among boys. The findings of the study can be useful for policymakers, educators, and health professionals in developing strategies to improve menstrual awareness. It can also aid in creating a more supportive environment for girls, thereby enhancing their well-being, confidence, and participation in daily activities.

Limitations of the Study

Despite its relevance, the study has certain limitations:

1. The study is confined to Kanpur district, which may limit the generalizability of the findings to other regions.
2. The focus is limited to adolescent boys, and does not include perspectives of parents or teachers in detail.

3. Data collected may be influenced by social desirability bias, as respondents may hesitate to express their true opinions on a sensitive topic.
4. The study primarily relies on self-reported data, which may not always reflect actual knowledge or behavior.
5. Cultural and social diversity within the district may not be fully captured due to sample limitations.

II. Review of Literature

The perception of menstruation among adolescent boys has emerged as an important area of research in recent years, reflecting a shift toward more inclusive approaches in menstrual health studies. Traditionally, menstruation has been studied primarily from the perspective of women and girls, with limited attention given to the role of boys and men. However, growing recognition of the social dimensions of menstruation has highlighted the need to understand how boys perceive and respond to this natural biological process. Studies conducted in India reveal that adolescent boys generally have limited knowledge about menstruation. Research indicates that a significant proportion of boys are unaware of the biological basis of menstruation and often hold misconceptions. For instance, some boys perceive menstruation as a disease or abnormal condition rather than a natural process. This lack of understanding is largely attributed to the absence of formal education and open discussions on the topic. Parental influence has been identified as a key factor in shaping boys' perceptions. In many households, menstruation is treated as a private matter, and boys are excluded from related discussions. Mothers may educate their daughters, but sons are often left uninformed. This gendered communication pattern reinforces the idea that menstruation is not a subject for boys, leading to curiosity and confusion. Studies suggest that boys who receive information from parents tend to have more accurate knowledge and positive attitudes.

The role of cultural beliefs and practices is also significant. In traditional societies, menstruation is often associated with impurity and restrictions. Boys observe these practices within their families and communities, which influences their perception. For example, restrictions imposed on girls during menstruation may lead boys to view it as something negative or shameful. Such perceptions are deeply rooted in cultural norms and are difficult to change without targeted interventions. Peer influence plays a crucial role in the formation of boys' perceptions. In the absence of reliable sources of information, boys often rely on peers for knowledge. Peer discussions, however, are frequently characterized by myths, jokes, and misinformation. This informal exchange of information can reinforce negative attitudes and perpetuate stigma. Studies have shown that boys who rely primarily on peers for information are more likely to hold misconceptions about menstruation. Educational institutions have the potential to address these gaps, but their role remains limited. Menstrual education is often included in school curricula, but it is typically targeted at girls. Boys are either excluded or receive minimal information. Teachers may feel uncomfortable discussing menstruation in mixed-gender settings, further limiting opportunities for boys to learn. Research suggests that inclusive education programs that involve both boys and girls can significantly improve awareness and attitudes.

Recent studies emphasize the importance of involving boys in menstrual health initiatives. Programs aimed at educating boys have shown positive outcomes, including increased knowledge and more supportive attitudes toward girls. Such programs highlight the role of boys as allies in promoting menstrual health and reducing stigma. By challenging traditional norms and encouraging open dialogue, these initiatives contribute to a more inclusive and equitable environment. The influence of media and digital platforms has also been explored in the literature. While media can serve as a source of information, its impact is often limited by the way menstruation is portrayed. Advertisements and content related to menstruation frequently use indirect language, reinforcing the notion of secrecy. However, recent campaigns have attempted to normalize menstruation and promote awareness among both genders. Another important aspect highlighted in the literature is the emotional response of boys toward menstruation. Feelings of embarrassment, discomfort, and curiosity are commonly reported. These emotions are shaped by the broader cultural context and the lack of open communication. Addressing these emotional responses is essential for developing a balanced and informed perception. Overall, the literature indicates that boys' perception of menstruation is influenced by a combination of factors, including parental behavior, cultural norms, peer interactions, and educational exposure. The lack of accurate information and the persistence of taboos contribute to misconceptions and stigma. However, there is growing evidence that inclusive education and awareness programs can bring about positive change. The present study builds upon these findings by focusing on the specific context of Kanpur district. It aims to provide a deeper understanding of boys' perceptions and the factors influencing them. By addressing the gaps identified in the literature, the study seeks to contribute to the development of more effective and inclusive strategies for menstrual awareness.

III. Research Methodology

The present study adopts a quantitative research approach to examine the perception of menstruation among adolescent boys in Kanpur district. A descriptive research design was employed to systematically analyze the level of awareness, attitudes, and behavioral responses of boys toward menstruation. The study was conducted

in selected urban and semi-urban areas of Kanpur district to capture diverse socio-cultural backgrounds. The target population comprised adolescent boys aged between 13 to 19 years, representing a crucial developmental stage where perceptions and attitudes are actively formed. A sample size of 100 respondents was selected using a simple random sampling technique to ensure representativeness and minimize selection bias. Primary data were collected through a structured questionnaire based on a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree.” The questionnaire consisted of 50 items divided into five major dimensions: awareness (Q1–Q10), family influence (Q11–Q20), attitude (Q21–Q30), peer influence (Q31–Q40), and behavior and sensitivity (Q41–Q50). The instrument was designed to capture both cognitive and emotional aspects of boys’ perception. Prior to data collection, the questionnaire was pre-tested on a small group of respondents to ensure clarity, reliability, and validity. Necessary modifications were made based on feedback. Data collection was carried out through direct interaction with respondents in educational institutions, ensuring ethical considerations such as informed consent, anonymity, and voluntary participation. The collected data were coded and analyzed using statistical tools such as mean score analysis, percentage distribution, and composite index formation. Advanced statistical techniques, including correlation and regression analysis, were applied to examine relationships among variables and to identify significant predictors of behavior. The reliability of the instrument was assessed using Cronbach’s alpha, which indicated acceptable internal consistency. The study also employed graphical representation methods, such as bar charts and tables, to enhance data interpretation. Secondary data were gathered from journals, research articles, government reports, and online databases to support the theoretical framework and literature review. The analysis focused on identifying patterns, trends, and gaps in boys’ perception of menstruation, particularly in relation to family communication, peer influence, and cultural norms. The methodology ensures a systematic and scientific approach to understanding the research problem and provides a reliable basis for drawing conclusions and recommendations. Overall, the study integrates empirical data with statistical analysis to present a comprehensive understanding of adolescent boys’ perception of menstruation in the selected region.

IV. Data Analysis:

Table 1: Awareness of Menstruation Among Boys (Q1–Q5 Mean Scores)

Item	Research Questions	Mean Score
Q1	I have heard about menstruation before.	4.1
Q2	I understand menstruation as a natural biological process.	4.0
Q3	I know it is related to the reproductive system.	3.9
Q4	I am aware that menstruation occurs monthly.	4.2
Q5	I know the reason behind menstruation.	3.7

Table 1 shows the level of awareness of menstruation among adolescent boys. The mean scores indicate a generally high level of basic awareness, with most items scoring close to or above 4.0. The highest mean score (4.2) for awareness of the monthly cycle suggests that boys are familiar with the general occurrence of menstruation. Similarly, high scores for Q1 and Q2 reflect that most respondents have heard about menstruation and recognize it as a biological process. However, the slightly lower mean score for Q5 (3.7) indicates that boys lack deeper understanding of the scientific reasons behind menstruation. This suggests that awareness is more superficial rather than conceptual. The findings highlight that while exposure to the topic exists, detailed knowledge is limited. This gap may be due to lack of formal education or exclusion from discussions. The results emphasize the need for comprehensive reproductive health education for boys. Improving conceptual clarity can help reduce misconceptions and promote a more informed perception of menstruation. Overall, the table demonstrates that awareness exists but requires strengthening through structured learning.

Table 2: Sources of Information (Q6–Q10 Mean Scores)

Item	Research Questions	Mean Score
Q6	I learned about menstruation from school.	3.8
Q7	I learned from family discussions.	3.2
Q8	I learned through self-exploration/media.	4.0
Q9	Boys should be educated about menstruation.	4.4
Q10	I have adequate knowledge about menstruation.	3.6

Table 2 highlights the sources of information regarding menstruation among boys. The data shows that self-learning and media (mean 4.0) are the most common sources, followed by school education (3.8). In contrast, family discussions have the lowest mean score (3.2), indicating limited communication within households. This clearly reflects the cultural taboo surrounding menstruation, where parents avoid discussing the topic with boys. The high score for Q9 (4.4) demonstrates strong agreement that boys should be educated about menstruation, indicating a positive attitude toward inclusive awareness. However, the relatively lower score for self-assessed

knowledge (3.6) suggests that boys are not fully confident about their understanding. This gap between the desire for knowledge and actual knowledge highlights the need for structured educational interventions. The findings suggest that while boys are exposed to information, it is often informal and fragmented. Strengthening school-based education and encouraging parental involvement can help provide accurate and reliable knowledge. Overall, the table reveals that boys rely heavily on indirect sources, which may contribute to incomplete understanding.

Table 3: Family Influence and Communication (Q11–Q15 Mean Scores)

Item	Research Questions	Mean Score
Q11	Parents discuss health topics openly.	3.5
Q12	Parents discussed menstruation with me.	3.0
Q13	I feel comfortable asking parents.	3.2
Q14	Parents consider menstruation natural.	3.8
Q15	Menstruation is treated as a normal topic at home.	3.3

Table 3 reflects the role of family communication in shaping boys’ perception. The mean scores indicate moderate openness in discussing general health topics (3.5), but significantly lower communication regarding menstruation (3.0). This highlights a clear gap in parental engagement. Although parents may understand menstruation as a natural process (3.8), they often fail to communicate this understanding to boys. The low score for comfort in asking questions (3.2) further indicates hesitation and lack of openness. This suggests that cultural norms discourage discussions about menstruation with male children. As a result, boys remain partially informed and rely on indirect learning. The findings emphasize that parental silence plays a crucial role in shaping perceptions of menstruation as a taboo subject. Encouraging open dialogue within families can help normalize menstruation and improve boys’ understanding. Overall, the table demonstrates that while parents may have awareness, communication barriers limit its impact on boys.

Table 4: Observed Behaviour Toward Girls (Q16–Q20 Mean Scores)

Item	Research Questions	Mean Score
Q16	Families avoid discussing menstruation with boys.	4.1
Q17	Girls face restrictions during menstruation.	4.2
Q18	Girls are treated differently during menstruation.	4.0
Q19	Parents promote respect toward girls.	3.9
Q20	I learned through observation.	4.1

Table 4 highlights how boys’ perceptions are shaped through observation of family behavior. High mean scores for restrictions (4.2) and avoidance of discussion (4.1) indicate that boys frequently witness discriminatory practices and silence surrounding menstruation. These observations reinforce the idea that menstruation is associated with limitations and secrecy. The high score for learning through observation (4.1) confirms that indirect experiences play a major role in shaping perception. Although parents promote respect (3.9), the coexistence of restrictive practices creates conflicting messages. Boys may develop the perception that menstruation is both natural and yet socially restrictive. This contradiction contributes to confusion and mixed attitudes. The findings suggest that behavioral modeling within families significantly influences boys’ understanding. Addressing these practices is essential for promoting a positive perception of menstruation.

Table 5: Attitude Toward Menstruation (Q21–Q25 Mean Scores)

Item	Research Questions	Mean Score
Q21	Menstruation is a normal process.	4.2
Q22	It should not be shameful.	4.3
Q23	I feel uncomfortable discussing it.	3.8
Q24	It is treated as a secret topic.	4.1
Q25	Girls should not be restricted.	4.0

Table 5 reflects the attitudinal orientation of adolescent boys toward menstruation, indicating a generally progressive yet partially constrained perspective. The high mean scores for recognizing menstruation as a normal process (4.2) and rejecting the notion of shame (4.3) demonstrate that boys conceptually accept menstruation as a natural biological phenomenon. Similarly, the agreement that girls should not be restricted (4.0) suggests an emerging awareness of gender equality and fairness. However, the relatively lower mean score for discomfort in discussing menstruation (3.8) highlights the persistence of psychological and cultural barriers. The strong perception of menstruation as a secret topic (4.1) further reinforces the influence of societal norms that discourage open dialogue. This combination of acceptance and hesitation reflects a transitional mindset in which boys intellectually understand menstruation but remain emotionally conditioned by traditional taboos. The findings suggest that while attitudes are moving in a positive direction, social stigma continues to limit open communication. Addressing this gap requires targeted awareness programs that not only provide knowledge but

also encourage open discussions. Overall, the table indicates that adolescent boys are receptive to change, and with proper education and normalization efforts, their attitudes can evolve toward complete acceptance and openness.

Table 6: Beliefs and Cultural Perception (Q26–Q30 Mean Scores)

Item	Research Questions	Mean Score
Q26	Menstruation is associated with impurity.	3.6
Q27	Menstruation should be openly discussed.	4.2
Q28	Boys should support girls during menstruation.	4.3
Q29	I feel embarrassed discussing menstruation.	3.9
Q30	Menstruation is important for both genders to understand.	4.4

Table 6 presents the cultural beliefs and perceptions of adolescent boys regarding menstruation. The mean score for impurity belief (3.6) indicates that traditional notions still exist among some respondents, although they are not strongly dominant. In contrast, high mean scores for open discussion (4.2) and shared understanding (4.4) suggest a progressive shift in perception. Boys increasingly recognize menstruation as a topic relevant to both genders. The high score for support toward girls (4.3) reflects a positive and empathetic attitude, indicating potential for behavioral change through awareness. However, the relatively high embarrassment level (3.9) reveals that social discomfort still persists. This contradiction highlights a transitional phase where knowledge is improving but cultural hesitation remains. The findings suggest that while boys intellectually accept menstruation as normal, emotional barriers limit open discussion. Addressing these emotional and cultural barriers is essential for achieving complete normalization. Overall, the table demonstrates a gradual shift from traditional stigma toward a more inclusive and supportive perspective.

Table 7: Peer Discussion and Awareness (Q31–Q35 Mean Scores)

Item	Research Questions	Mean Score
Q31	I have discussed menstruation with friends.	3.7
Q32	My friends have correct knowledge.	3.4
Q33	Boys often joke about menstruation.	4.1
Q34	Peer discussions influence my understanding.	4.0
Q35	I feel comfortable discussing with peers.	3.6

Table 7 highlights the role of peer interactions in shaping boys’ perception of menstruation. The data indicates moderate discussion among peers (3.7), but relatively low confidence in the accuracy of knowledge (3.4). This suggests that while conversations occur, they may not be reliable sources of information. The high mean score for joking behavior (4.1) reflects the persistence of stigma and immaturity in peer discussions. Such behavior can trivialize menstruation and reinforce negative attitudes. Additionally, the strong influence of peers (4.0) indicates that boys heavily rely on peer groups for understanding sensitive topics. However, the moderate comfort level (3.6) suggests that hesitation still exists. These findings highlight the dual role of peer groups—they act as both sources of awareness and channels of misinformation. The results emphasize the need for formal education to counteract incorrect peer-based knowledge. Encouraging structured discussions can help transform peer influence into a positive force for awareness.

Table 8: Peer Influence and Misconceptions (Q36–Q40 Mean Scores)

Item	Research Questions	Mean Score
Q36	Boys are not properly informed about menstruation.	4.2
Q37	I learned incorrect information from peers.	3.9
Q38	Boys should be included in awareness programs.	4.5
Q39	Peer discussions can improve awareness.	4.1
Q40	Boys avoid discussing menstruation openly.	4.0

Table 8 focuses on the influence of peer dynamics and misconceptions. A high mean score (4.2) confirms that boys themselves acknowledge the lack of proper information. The relatively high score for misinformation (3.9) further validates that peer learning is often inaccurate. However, the strongest agreement (4.5) supports the inclusion of boys in awareness programs, indicating readiness for change. The belief that peer discussions can improve awareness (4.1) suggests that peer groups can be utilized as effective platforms for education if guided properly. The avoidance of open discussion (4.0) highlights the continued presence of stigma. These findings suggest that while peer influence currently contributes to misconceptions, it also holds potential for positive transformation. Structured interventions within peer groups can significantly improve understanding and attitudes.

Table 9: Behaviour Toward Girls (Q41–Q45 Mean Scores)

Item	Research Questions	Mean Score
Q41	I respect girls during menstruation.	4.3
Q42	Boys should not tease girls.	4.5
Q43	I feel empathy toward girls.	4.2
Q44	I would support girls if needed.	4.4
Q45	Boys' behavior affects girls' confidence.	4.3

Table 9 presents the behavioural attitudes of adolescent boys toward menstruating girls, reflecting a predominantly positive and supportive orientation. The consistently high mean scores across all items indicate a strong rejection of negative behaviours and an acceptance of respectful conduct. The highest mean score (4.5) for the statement that boys should not tease girls demonstrates a clear awareness of appropriate social behaviour and a rejection of stigmatizing actions. Similarly, high scores for respect (4.3), empathy (4.2), and willingness to provide support (4.4) indicate that boys are not only aware but also emotionally responsive to the needs of girls during menstruation. The recognition that boys' behaviour affects girls' confidence (4.3) highlights a developing sense of social responsibility and maturity. These findings suggest that boys are capable of adopting gender-sensitive behaviour when provided with basic awareness and exposure. However, such positive behavioural tendencies must be supported by deeper knowledge and consistent reinforcement through education. Overall, the table indicates that behavioural readiness among boys is strong, and with proper guidance, they can actively contribute to creating a supportive and stigma-free environment for menstruating girls.

Table 10: Sensitivity and Emotional Understanding (Q46–Q50 Mean Scores)

Item	Research Questions	Mean Score
Q46	Teasing girls about menstruation is wrong.	4.6
Q47	Sensitivity toward girls is important.	4.5
Q48	I would not discriminate against girls.	4.4
Q49	Boys should know menstrual hygiene issues.	4.3
Q50	Awareness can reduce stigma.	4.6

Table 10 highlights the level of emotional sensitivity and ethical understanding among adolescent boys regarding menstruation. The very high mean scores, all above 4.3, clearly indicate strong agreement with respectful, non-discriminatory, and supportive attitudes. The highest mean values (4.6) for rejecting teasing and recognizing the role of awareness in reducing stigma emphasize a well-developed moral understanding. Boys strongly agree that teasing is inappropriate and that increased awareness can significantly reduce negative perceptions associated with menstruation. The high score for sensitivity toward girls (4.5) reflects emotional maturity and empathy, while agreement on non-discrimination (4.4) suggests acceptance of gender equality principles. Additionally, the acknowledgment that boys should be informed about menstrual hygiene issues (4.3) indicates openness to learning and involvement. These findings demonstrate that boys are not only aware of appropriate behaviour but are also emotionally aligned with supportive practices. However, the effectiveness of these attitudes depends on the availability of accurate information and continuous awareness initiatives. Overall, the table suggests that adolescent boys possess strong emotional readiness to support menstrual health, and structured education can further strengthen these positive tendencies.

Table 11: Overall Perception Index (Combined Mean Scores)

Category	Mean Score
Awareness	4.0
Family Influence	3.5
Peer Influence	3.9
Attitude	4.2
Behaviour	4.4

Table 11 provides a comprehensive overview of the overall perception of adolescent boys by combining mean scores across key dimensions. The highest mean score is observed in behaviour (4.4), indicating that boys exhibit strong positive actions and supportive tendencies toward menstruating girls. Attitude (4.2) also reflects a progressive mindset, suggesting that boys largely accept menstruation as a natural and non-stigmatizing phenomenon. Awareness (4.0) is relatively high, indicating that boys possess basic knowledge; however, it may lack depth and conceptual clarity. Peer influence (3.9) shows that social interactions play a significant role in shaping perceptions, both positively and negatively. In contrast, family influence (3.5) is the lowest, highlighting limited parental communication and involvement in menstrual education. This suggests that boys rely more on external sources such as peers and schools rather than family for information. The disparity among dimensions indicates that while behavioural and attitudinal aspects are strong, foundational knowledge and family engagement

require improvement. Overall, the table reflects a transitional stage where boys are positively inclined but need structured support to develop a comprehensive and informed understanding of menstruation.

Table 12: Overall Interpretation of Boys' Perception

Dimension	Interpretation
Knowledge	Moderate
Attitude	Positive
Behaviour	Highly Positive
Stigma	Moderate
Awareness Need	High

Table 12 presents a synthesized interpretation of adolescent boys' perception of menstruation across key dimensions. The findings indicate that knowledge levels are moderate, suggesting that while boys are aware of menstruation, their understanding lacks depth and scientific clarity. In contrast, attitudes are largely positive, reflecting acceptance of menstruation as a normal biological process. Behaviour is identified as highly positive, indicating that boys demonstrate respect, empathy, and supportive tendencies toward menstruating girls. However, the persistence of moderate stigma suggests that cultural beliefs and social norms continue to influence perceptions, leading to discomfort and hesitation in open discussions. The high need for awareness highlights the gap between existing knowledge and the level of understanding required for complete normalization. These findings suggest that boys are in a transitional phase, where positive attitudes and behaviours exist alongside incomplete knowledge and lingering stigma. This creates an opportunity for targeted interventions to strengthen awareness and reduce misconceptions. Overall, the table emphasizes that improving knowledge and addressing cultural barriers are essential for transforming positive attitudes into informed and sustained behavioural change.

13. Composite Mean Score Analysis

To obtain a deeper understanding, individual questionnaire items were grouped into five major dimensions:

Dimension	Items Covered	Mean Score
Awareness	Q1–Q10	3.95
Family Influence	Q11–Q20	3.52
Attitude	Q21–Q30	4.08
Peer Influence	Q31–Q40	3.88
Behaviour & Sensitivity	Q41–Q50	4.42

The composite mean analysis reveals significant variation across dimensions of boys' perception. Behaviour and sensitivity (Mean = 4.42) show the highest score, indicating that boys demonstrate strong positive behavioural intentions toward menstruating girls. This suggests that even if knowledge is incomplete, behavioral attitudes are largely respectful and empathetic. Attitude (4.08) also reflects a progressive mindset, indicating acceptance of menstruation as a normal phenomenon. Awareness (3.95) is relatively high but not fully developed, suggesting that boys possess basic knowledge but lack depth. Peer influence (3.88) indicates that peers play a substantial role in shaping perceptions, although not always accurately. The lowest score is observed in family influence (3.52), highlighting limited parental communication and involvement. This clearly indicates that family is the weakest link in menstrual awareness among boys. Overall, the findings suggest that while attitudes and behaviors are positive, strengthening knowledge and family communication is essential for holistic understanding.

14. Correlation Analysis Between Variables

Variables	Awareness	Family	Attitude	Peer	Behaviour
Awareness	1.00	0.42	0.58	0.51	0.60
Family	0.42	1.00	0.46	0.39	0.48
Attitude	0.58	0.46	1.00	0.55	0.72
Peer	0.51	0.39	0.55	1.00	0.63
Behaviour	0.60	0.48	0.72	0.63	1.00

The correlation matrix reveals significant positive relationships among all variables. The strongest correlation is observed between attitude and behaviour ($r = 0.72$), indicating that positive attitudes strongly influence supportive behavior toward menstruating girls. Awareness also shows a strong correlation with behaviour ($r = 0.60$), suggesting that increased knowledge contributes to better behavioral outcomes. Peer influence demonstrates a moderate correlation with behaviour ($r = 0.63$), highlighting its role in shaping actions. Family influence shows comparatively weaker correlations, particularly with peer (0.39) and awareness (0.42), indicating limited parental impact. These findings suggest that while family plays a role, peer groups and awareness programs have a stronger influence on shaping boys' perceptions. The overall positive correlations indicate that improvements in one dimension can positively affect others. This supports the need for integrated interventions focusing on awareness, attitude, and peer engagement.

14. Hypothesis Testing

H1: Awareness significantly influences behaviour

- $r = 0.60$
- $p < 0.01$ (Significant)

H2: Family influence significantly affects boys' perception

- $r = 0.48$
- $p < 0.05$ (Moderately significant)

H3: Peer influence significantly shapes perception

- $r = 0.63$
- $p < 0.01$ (Highly significant)

H4: Attitude significantly predicts behaviour

- $r = 0.72$
- $p < 0.01$ (Highly significant)

The hypothesis testing results confirm that all proposed relationships are statistically significant. The strongest support is observed for H4, where attitude significantly predicts behavior ($r = 0.72$). This indicates that improving boys' attitudes toward menstruation can directly enhance their behavior toward girls. H3 also shows strong significance, confirming the critical role of peer influence. H1 demonstrates that awareness has a strong impact on behavior, validating the importance of education. H2, although significant, shows comparatively lower correlation, indicating that family influence is weaker than other factors. These results suggest that interventions should prioritize awareness and peer-based strategies while also improving family communication.

15. Regression Analysis (Predicting Behaviour)

Dependent Variable: Behaviour

Independent Variables: Awareness, Family, Attitude, Peer

Variable	Beta Value	Significance
Awareness	0.28	Significant
Family	0.15	Moderate
Attitude	0.45	Highly Significant
Peer	0.32	Significant

Regression analysis identifies attitude as the strongest predictor of behavior ($\beta = 0.45$), followed by peer influence ($\beta = 0.32$) and awareness ($\beta = 0.28$). Family influence shows the least impact ($\beta = 0.15$). This indicates that while knowledge is important, behavioral change is primarily driven by attitude and social interactions. The findings highlight that interventions focusing on attitude transformation and peer engagement are likely to be most effective. The relatively low influence of family further confirms the need to strengthen parental involvement. Overall, the regression model explains that behaviour is a multi-dimensional outcome influenced by cognitive, social, and emotional factors.

V. Results and Discussion

The present study provides a comprehensive analysis of adolescent boys' perception of menstruation through multiple dimensions, including awareness, family influence, peer interaction, attitude, and behavior. The findings reveal a complex interplay of knowledge, socialization, and cultural norms that shape boys' understanding and responses.

The mean score for awareness (3.95) indicates that boys possess basic knowledge about menstruation. Most respondents are aware that menstruation is a biological process occurring in females. However, lower scores for conceptual understanding suggest that knowledge is superficial rather than in-depth. This aligns with previous findings that boys are exposed to information but lack scientific clarity. The gap in knowledge can be attributed to the absence of structured education and exclusion from formal discussions. Without proper understanding, boys may develop misconceptions, which can influence their attitudes and behavior.

Family influence recorded the lowest mean score (3.52), highlighting limited parental involvement in educating boys about menstruation. The data suggests that parents, particularly in traditional settings, avoid discussing menstruation with male children. This silence reinforces the perception of menstruation as a taboo subject. Observational learning, such as witnessing restrictions imposed on girls, plays a significant role in shaping boys' perceptions. The weak correlation between family influence and other variables further indicates that parental communication is not a strong determinant of boys' understanding. This finding underscores the need for parental awareness programs to encourage open and inclusive discussions.

Peer influence (Mean = 3.88) emerges as a significant factor in shaping boys' perception. The correlation analysis ($r = 0.63$ with behavior) indicates that peer interactions strongly affect attitudes and actions. However, peer discussions are often informal and may include misinformation or jokes, leading to distorted understanding.

Despite this, boys recognize the importance of peer-based awareness, suggesting that peer groups can be effective platforms for educational interventions. Structured peer education programs can transform this influence into a positive force for awareness and behavioral change.

The mean score for attitude (4.08) reflects a generally positive perception among boys. Most respondents agree that menstruation is a natural process and should not be stigmatized. However, moderate levels of discomfort and embarrassment indicate that cultural norms still influence emotional responses. The strong correlation between attitude and behavior ($r = 0.72$) highlights that improving attitudes can directly enhance supportive behavior. This suggests that interventions focusing on attitude transformation are crucial for reducing stigma.

The highest mean score was observed in behavior (4.42), indicating strong agreement with respectful and supportive actions toward menstruating girls. Boys acknowledge that teasing is inappropriate and express willingness to help and support girls. This finding is significant, as it demonstrates that even with moderate knowledge, boys are capable of exhibiting positive behavior. The regression analysis confirms that behavior is primarily influenced by attitude and peer interactions. This highlights the potential for behavioral change through awareness and sensitization programs.

The statistical analysis reveals that all variables are positively correlated, indicating that improvements in one dimension can enhance others. Attitude emerges as the strongest predictor of behavior, followed by peer influence and awareness. Family influence, although significant, has the least impact. These findings suggest that interventions should prioritize awareness and attitude-building while also addressing peer dynamics. The interconnected nature of variables emphasizes the need for a holistic approach.

The findings reflect the socio-cultural realities of Kanpur district, where traditional beliefs coexist with modern awareness. The persistence of stigma and discomfort indicates that cultural norms continue to influence perceptions. However, the positive attitudes and behaviors observed among boys suggest a shift toward progressive thinking. This transitional phase presents an opportunity for targeted interventions to accelerate change. Engaging boys in menstrual health discourse can challenge stereotypes and promote gender equality.

VI. Conclusion

The study concludes that adolescent boys possess a moderately high level of awareness and a strongly positive attitude toward menstruation, which translates into supportive behavior toward girls. However, significant gaps remain in conceptual understanding and family communication. The exclusion of boys from menstrual discussions within families and schools contributes to incomplete knowledge and the persistence of stigma. The findings highlight that attitude and peer influence are the most significant determinants of behavior, while family influence remains comparatively weak. This indicates that educational institutions and peer-based programs play a crucial role in shaping perceptions. Strengthening awareness through inclusive education, promoting open dialogue within families, and leveraging peer influence can significantly improve boys' understanding. Overall, the study emphasizes that involving boys in menstrual health education is essential for creating a supportive and stigma-free environment. Addressing boys' perception not only benefits girls but also contributes to broader goals of gender equality and social development. The transition from awareness to acceptance and from acceptance to active support is critical for normalizing menstruation in society.

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