Premenstrual Syndrome and Quality of Life of Rural Adolescent Girls in Kalaburagi District.

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Abstract: As a transitional period between childhood and adulthood, adolescence is an important period. In India, this is true especially for the female population as they are considered the most vulnerable group. They continue to face many problems including the lack of proper education, no easy access to health care facilities and lack of proper information on the various issues they face. They also lack the knowledge regarding their sexual and reproductive health. This is because of the reluctance by the older sections of the population to discuss such matters due to embarrassment and also due to the lack of proper knowledge themselves. One of the issues with menstruation is Premenstrual Syndrome. Premenstrual Syndrome is a group of symptoms that are related to the menstrual cycle that affects women during their reproductive age that occurs 7 to 14 days before menstruation diminishes with the beginning of menstrual flow. The severity of the symptoms can lead to a breakdown of social and interpersonal relationships and it can interfere with normal day-to-day functioning of the individual. The present study was done to understand whether there exists a relationship between premenstrual tension syndrome and Quality of Life. The study was conducted on 64 adolescent girls from rural background in Gulbarga district of Karnataka. The results show that dysmenorrhea, behaviour change and negative affect of Premenstrual Syndrome has a negative relationship with physical functioning, emotional and school functioning whereas pain has a positive relationship with social functioning.

Key words: Premenstrual Syndrome, Quality of Life, Rural Adolescent Girls.

I. Introduction

1.1. Adolescence

The period of adolescence is important because it is the formative years of an individual during which preparations are underway for taking up responsibilities including healthy responsible parenthood and social, cultural and economic issues during adulthood (Sivagurunathan, Umadevi, Rama, & Gopalakrishnan, 2015). It is a critical age group and Curtis (2015) argues that it is considered as a theoretical construct that is evolving in a dynamic manner. There is no universally accepted definition of adolescence as the age of transition in different cultures is regarded in different perspectives. The classical theories view adolescence as the age in which new abilities and reasoning emerge that result in changes in how people think of themselves and the world (Amsel, 2011). Adolescence includes the physical growth and emergence of secondary sexual characteristics and cognitive, emotional and social changes.

The onset of adolescence is characterized by changes including rapid physical growth, cognitive and emotional changes and the development of social roles which forms the basis for the functioning during adulthood (Al Makadma, 2017; Crone & Dahl, 2012). Today, 1.9 billion adolescents live in the world, majority of whom live in the middle and low income countries of which 234 billion (20%) live in India (Mehta et al., 2013; Morris & Rushwan, 2015). Adolescents is defined by the World Health Organization (WHO) as individuals falling between the ages of 10 and 19 years (Mehta et al., 2013). Adolescents constitute a very vital part of the population and they play a major role in the development of the country in economic and social spheres (Gupta, Ramani, & Soors, 2012).

Investing in adolescents will not only help in the economic and social development of the country, it will also help achieve the millennium development goals, reduce deaths due to injuries and violence and help improve their health (UNICEF, 2012). The healthy development of adolescents is impacted by their environment, education, supportive relationships, and access to high quality health services (Al Makadma, 2017). Fostering the conditions for the healthy development of adolescents and supporting their health should be a global priority.

1.2. Adolescent Health

Health is a condition that permits people to lead productive lives in physical, social and economic spheres and is hence considered to be an important factor for good health. As defined by WHO, health is a "State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." Health in adolescence is due to the collaboration between prenatal and early childhood development as well as the biological and social changes during puberty, social determinants and risk and protective factors that determine the uptake of health-related behaviours (Sawyer et al., 2012).

Adolescent health care is a challenge compared to that of children and adults. This is due to their rapid development in various spheres of life like physical, intellectual, and emotional areas (Salam, Das, Lassi, & Bhutta, 2016). Evidence from middle and low income countries show the state of health services. The health services for adolescents are poorly coordinated, poor quality and there is a lack of a comprehensive programme required for addressing health needs of adolescents (Sivagurunathan et al., 2015).

Investing in adolescent health has long-term implications for the well-being of the individual and society as a whole and the significant factors contributing to adolescent health are found in environments in which the adolescents live and the health behaviours they undertake in various contexts (Call et al., 2002).

1.3. Adolescent reproductive health

In India, poor sexual health exists across all socioeconomic groups. Children have little understanding of sexual and reproductive health and associated problems. During adolescence, Sexual and Reproductive Health (SRH) can pose severe challenges for adolescents. Adolescent Sexual and Reproductive Health (ASRH) has often been overlooked, despite the risks present that will adversely effect the lives of adolescents (Morris & Rushwan, 2015). This is mainly due to the stigma and embarrassment associated that causes people to avoid this discussion (Paul, 2015; Thirunavukarasu and Simkiss, 2013).

Due to the large adolescent population in India, their sexual and reproductive health has become a priority for policy makers and researchers. Girls are forced into unwanted sex or marriage thereby putting them at a high risk of unwanted pregnancies, unsafe abortions and childbirth and they also face an increased risk of exposure to Sexually Transmitted Infections (STIs), especially HIV (Santhya, Haberland, Ram, Sinha, & Mohanty, 2007).

With the shift in the focus of the 1994 International Conference on Population and Development (ICPD) to address the needs and sexual and reproductive health and rights of adolescents, there has been an increasing interest on addressing ASRH (Rankin et al., 2016). The Government of India has actively promoted family planning and contraception. However, these programmes are not focused on adolescents who are just entering their reproductive years. Young couples have not received much guidance on how to ensure planned, happy, and healthy families (Wilder, Masilamani, & Daniel, 2005). Adolescent sexual and reproductive health has been overlooked despite the high risks that countries face for its neglect including early pregnancy and parenthood, difficulties accessing contraception and safe abortion, and high rates of HIV and sexually transmitted infections (Morris & Rushwan, 2015). In recognition of the importance of investing in adolescents' health several national policies and programmes are implemented now and then to address the needs of this group (Paul, 2015).

1.4. Premenstrual Syndrome

Premenstrual Syndrome is one of the most common disorders faced by women when they are in their reproductive age (Seedhom, Mohammed, & Mahfouz, 2013). It causes distress both physically and emotionally and also interferes with the daily life of women (Seedhom et al., 2013; Zaka & Mahmood, 2012). Premenstrual Syndrome are a group of symptoms that are physical, psychological and emotional in nature that has a negative effect on the day to day functioning of a woman (Delara et al., 2012; Seedhom et al., 2013). The social life of women may also be effected due to the severity of the symptoms (Biggs & Demuth, 2011). Not only is the physical and social life effected, the occupational realm of the females is also negatively affected (Biggs & Demuth, 2011; Delara et al., 2012). Recently, with PMS being recognized as a clinical entity under the Diagnostic & Statistical Manual V (DSM V), there has been a growing awareness among medical fraternity at large regarding the proper care and treatment of women during their premenstrual period (Pandian, Priyan, Vaik and Oumanath, 2016).

1.5. Quality of Life

Quality of Life (QOL) is a multidimensional construct that includes a person's subjective judgment of their overall life experience or congruence between desired and achieved life experiences (Taha Ibrahim Elgzar & Sayed, 2017). It can be defined as a feeling that the individual's life is changing entirely for the better and may also be described as how the individual perceives his/her state within the culture and value system (Sahin, Ozdemir and Unsal, 2014).

II. Abbreviations

1. WHO – World Health Organization
2. SRH – Sexual and Reproductive Health
3. STIs – Sexually Transmitted Infections
4. PMS – Premenstrual Syndrome
5. DSM - Diagnostic & Statistical Manual
6. QOL – Quality of Life
7. ASRH – Adolescent Sexual and Reproductive health
8. ICPD – International Conference on Population and Development
9. UNICEF – United Nations Children's Fund

III. Method

3.1. Aim

The present study was conducted with the aim of assessing the relationship between Premenstrual Syndrome and Quality of Life among the rural adolescent girls.

3.2. Data and Sources of Data

For the present study, primary data has been collected. The study was conducted in two schools in Kalaburagi district of Karnataka.

3.3. Theoretical Framework

The variables of the study are independent and dependent variable. The independent variable is the Premenstrual Syndrome and the dependent variable is Quality of Life.

3.4. Population and Sample

The study was conducted in two schools in Kalaburagi district of Karnataka. Of the two schools, one was a rural school and the other school was urban. For the study, the schools were approached and permission was taken to conduct the study. Rapport was established with the female students and then verbal consent was taken from them to conduct the study after which questionnaires were distributed and filled up by participants. To ensure that they understood the questions, the students were led question by question while answering the questions in the study instrument. The study was conducted on sixty four school going girls in the age range of 13-16 years studying in higher secondary schools.

3.5. Inclusion and Exclusion Criteria

One of inclusion criteria was girls who had attained menarche and in good physical health were taken for the study. Anonymity was maintained by not including the names of the students in the questionnaire. Quality of Life and Premenstrual Syndrome was assessed.

3.6. Tools Used for the Study

For Quality of Life assessment, Pediatric Quality of Life Scale (PedsQL) was used which is used to measure health related Quality of Life in children and adolescents. The Pediatric Quality of Life scale has 23 items and has four dimensions namely physical, emotional, social and school functioning. The scoring ranges from 0 (never a problem) to 4 (is a problem almost always) and lesser score indicates higher Quality of Life. The reliability is 0.88 and validity is 0.83. It is used by children and adolescents (ages 2-18). For assessing Premenstrual Syndrome, the Moos Menstrual Distress questionnaire was used that is a 47 item self-report inventory that has items that are associated with premenstrual, menstrual and postmenstrual phase. The items in the scale are divided into eight categories namely pain (6 items), concentration (9 items), behavioural change (5 items), autonomic reaction (4 items), water retention (4 items), arousal (5 items) and control (6 items). The respondents have to mention in the column given the rating of the intensity of the experience from a range of 0 to 4 with 0 being no experience of syndrome and 4 being severe. The test-retest reliability of the entire test as well as the eight subscales range from r = 0.993 to 0.998. With the aim of the present study being to assess the relationship between Quality of Life and Premenstrual Syndrome of rural adolescent girls, from the menstrual distress questionnaire, only the premenstrual dimension was taken into consideration.

3.7. Statistical Analysis

Data was analysed using SPSS (version 20). Correlation was used to analyse the relationship between Premenstrual Syndrome and Quality of Life.

IV. Results

Given below are the results of the correlation between the dimensions of Quality of Life and the eight categories of Premenstrual Syndrome. The study was conducted on 64 girls from two schools in Kalaburagi district

Table 1 Correlation between the dimensions of Quality of Life and pain pms

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Pain	-.369**	-.120	.271*	-.090

**.01 level (2-tailed).

*..05 level (2-tailed).

From table 1 it can be seen that pain Premenstrual Syndrome has a strong inverse correlation with physical dimension of Quality of Life and a positive correlation with the social dimension of Quality of Life. The correlation of -.369 is significant at 0.01 level of significance. It can be interpreted as with the increase in the pain in Premenstrual Syndrome, there is a decrease in the physical functioning. Pain also has a correlation if .271 at 0.05 level of significance. It can be interpreted as the social functioning does not decrease with pain which includes muscle stiffness, headaches, fatigue and cramps.

Table 2 showing the correlation between Quality of Life dimensions and water retention pms

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Water Retention	.784	.142	.729	.189

**.01 level (2-tailed).
*..05 level (2-tailed).

From the table above it can be seen that there exists no correlation between any of the dimensions of Quality of Life and water retention which includes weight gain, swelling of abdomen or breasts and skin blemish.

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	.
School	.416**	.435**	.329**	-
Autonomic Reaction	-.175	-.146	.132	-.129

**.01 level (2-tailed).
*..05 level (2-tailed).

From the above table it can be seen that there is no correlation between the dimensions of Quality of Life and autonomic reaction which includes fainting and dizziness, nausea, vomiting and hot flashes.

Table 4 showing the correlation of dimensions of Quality of Life and negative affect

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Negative Affect	-.251*	-.302*	-.129	-.354**

**.01 level (2-tailed).
*..05 level (2-tailed).

From the above table it can be seen that there is a strong inverse correlation between the physical dimension, emotional dimension and school dimension of Quality of Life and negative affect in Premenstrual Syndrome. In the physical dimension, there is a strong inverse correlation of -.251 at 0.01 level of significance with negative affect. This shows that the physical functioning decreases with the increase in negative affect in Premenstrual Syndrome. In the emotional dimension there is an inverse correlation of -.302 at 0.01 level of significance. This shows that with increase in the negative affect, there is a reduction in the school functioning. There is an inverse correlation of -.354 at 0.05 level of significance in the domain of school functioning. This shows that with the increase in the negative affect, the functioning of the children in the school decreases. Negative affect includes loneliness, anxiety and mood swings, etc.

Table 5 Showing the correlation between the dimensions of Quality of Life and impaired concentration

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Impaired Concentration	-.162*	-.235*	-.135	-.197**

**.01 level (2-tailed).
*..05 level (2-tailed).

From the above table it can be seen that there is no correlation between the dimensions of Quality of Life and impaired concentration which includes forgetfulness, poor judgment and memory, etc.

Table 6 Showing the correlation between the dimensions of Quality of Life and behaviour change

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Behaviour Change	-.298*	-.185	.127	-.206

**.01 level (2-tailed).
*..05 level (2-tailed).

From the above table it can be seen that physical dimension has an inverse correlation with the behaviour change during Premenstrual Syndrome. There is a strong inverse correlation of -.298 significant at 0.05 level of significance. This can be interpreted as with the increase in the physical functioning, there is a change in the behaviour in terms of poor work performance, avoiding social activities, staying in bed, etc.

Table 7 Showing the correlation between the dimensions of Quality of Life and arousal

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Arousal	.105	.022	.101	-.032

**.01 level (2-tailed).
*..05 level (2-tailed).

From the above table, it can be seen that there is no correlation between the dimensions of Quality of Life and arousal (feeling of excitement and well-being) in Premenstrual Syndrome.

Table 8 Showing the correlation between the dimensions of Quality of Life and control

	Physical	Emotional	Social	School
Physical	-			
Emotional	.388**	-		
Social	-.038	.238	-	
School	.416**	.435**	.329**	-
Control	-.027	-.067	-.209	.038

**.01 level (2-tailed).
*..05 level (2-tailed).

From the above table it can be seen that there is no correlation between the dimensions of Quality of Life and control (numbness, chest pains, suffocation, etc.) in Premenstrual Syndrome.

V. Discussion

Premenstrual Syndrome is a group of symptoms that are related to the menstrual cycle that affects women during their reproductive age that occurs 7 to 14 days before menstruation, that is, the luteal phase of the menstrual cycle and diminishes with the beginning of menstrual flow. The severity of the symptoms can lead to a breakdown of social and interpersonal relationships and it can interfere with normal day-to-day functioning of the individual. Some of the symptoms are insomnia, food cravings, headache, breast tenderness, bloating, anxiety, irritability and mood swings, poor concentration as well as confusion and social withdrawal (Taghizadeh, Shirmohammadi, Arbabi, and Mehran, 2008)The present study was done to understand whether there exists a relationship between premenstrual tension syndrome and Quality of Life.

The present study was done to assess the relationship between Premenstrual Syndrome and Quality of Life among the rural adolescent girls. The study was conducted on girls in the age range of 13-16 years studying in higher secondary schools. 9 girls (14.1%) of the girls were of 13 years of age, 14 (21.9%) of the girls were of 14 years of age, 24 (37.5%) of girls were of 15 years of age and 17 (26.6%) girls were of 16 years of age. From the results of the study, it could be seen that pain was negatively correlated with physical functioning. This can be understood as the increase in dysmenorrhea lead to decrease in the physical functioning. Dysmenorrhea is associated with low Quality of Life (Joshi, Kural, Agrawal, Noor and Patil 2014; Charu, Amita, Sujoy and Thomas, 2012). However, pain had a positive correlation with social functioning which shows that dysmenorrhea did not affect the social functioning of the adolescent girls. Dysmenorrhea usually effects the social functioning of the individuals and there is less involvement in various activities (Yasir, Kant and Dar, 2014).

From the results it can be seen that physical dimension has an inverse correlation with the behavior change during Premenstrual Syndrome. This can be interpreted as with the increase in the physical functioning, there is a change in the behaviour. From the present study, it can be seen that there is an inverse correlation between physical functioning, emotional dimension and school functioning and negative affect during Premenstrual Syndrome which shows that with the increase of negative affect, there is a decrease in the functioning of the individual. With Premenstrual Syndrome, the negative moods have an effect on the physical functioning. Premenstrual Syndrome had a moderate but significant negative impact on the Quality of Life of affected girls, particularly school performance social interactions, life style and emotional well-being (Abbasi, Masood and Rizwan, 2012). In a study conducted by Elgzar and Sayed (2017), it was seen that people who have clinically significant Premenstrual Syndrome have lower physical functioning as well as social functioning, role limitations due to physical health, role limitations due to emotional problems, energy/fatigue and emotional well-being and poorer Quality of Life.

From the present study it can be seen that there is no correlation between the domains of Quality of Life and water retention, autonomic reaction, impaired concentration, arousal and control.

VI. Conclusion

The present study aimed at identifying the relationship between the Premenstrual Syndrome and Quality of Life of adolescent girls of rural background in Kalaburagi district of Karnataka. From the present study, it can be seen that dysmenorrhea, behaviour change and negative affect of Premenstrual Syndrome has a negative relationship with physical functioning, emotional and school functioning whereas pain has a positive relationship with social functioning. Premenstrual Syndrome effects the educational, social and emotional well-being of adolescent girls. Further study needs to be conducted with a larger sample to confirm these results.

VII. Limitations

There are a few limitations of this study. The study was conducted only in one district and two schools in that district. The small sample size makes it difficult to generalize the results. The study also did not clarify how many students had Premenstrual Syndrome. It just assessed the impact of Premenstrual Syndrome on the Quality of Life. The study also does not assess the severity of Premenstrual Syndrome among the sample.

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