IMPACT OF TWO COUNSELLING STRATEGIES IN RELIEVING PREMENSTRUAL TENSION AMONG FEMALE ADOLESCENTS IN LAGOS STATE

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Abstract

This study investigated the impact of activity schedule and anticipation training techniques in alleviating premenstrual tension among adolescent girls in Lagos State. A total of 105 senior secondary school girls participated in study. Quasi-experimental pre-test/post-test control group research design was adopted. The Premenstrual Symptoms Screening Tool for Adolescents (PSST-A) was used to gather relevant data. The reliability coefficient obtained using test-retest reliability was 0.796. One research question was raised and corresponding hypothesis was tested at 0. 05 level of significance. Mean, standard deviation and Analysis of Covariance statistics (ANCOVA) were used to test the hypothesis. The investigation revealed that there is significant difference in the post-test scores on premenstrual tension among participants exposed to activity schedule and anticipation training while the participants in control group reported no significant difference. Both counselling strategies were effective in alleviating premenstrual tension among adolescent school girls. The study recommends Activity Schedule and Anticipation Training in alleviating premenstrual tension among adolescents.

KEY WORDS: *Premenstrual Tension, Adolescents, Activity Schedule, Anticipation Training.*

Introduction

The onset of menstruation is an important phase in the life of adolescent girls. It is seen as a sign of maturity. Menarche is a crucial aspect in females' reproductive health; however it comes with some problems (Pangajam & Veeraman (2018). The well-being of female adolescents is considerably affected by their response to menarche, disposition towards menstruation and their behaviour during menstruation. Hence, the aforementioned can lead to menstrual related problems. Thus, one of the problems

associated with menstruation is premenstrual tension. Premenstrual tension is a menstrual condition which reoccurs monthly. It consists of a collection of physical, emotional, psychological and behavioural symptoms that affects females of reproductive age and happens within a menstrual cycle. When these symptoms occur every month, and affect females' normal life, it is known as premenstrual tension. It affects normal activities, interferes with daily functioning and results in deterioration of interpersonal relationships (Fiebai, Ukueku, & Ogu, 2018). It makes females experience physical and mood changes during the days before menstruation, only to subside within days of menstruating (American College of Obstetricians & Gynaecologists, 2015). Several factors have been suggested as possible causes of premenstrual tension. They include ovarian hormone fluctuations, lifestyle, and type of food intake, such as fried foods, sweet drink, fast food, sedentary lifestyle, as well as family history of premenstrual tension (Rad, Sabzevary, & Dehnavi, 2018).

The effects of premenstrual tension result in negative consequences because it produces psychosocial distresses such as: depression, anxiety, anger outburst, moodiness, crying spell, low self-esteem, aggression, acne, swelling of extremities, tiredness, sadness, hopelessness, irritability, feelings of guilt, inability to concentrate, little or too much sleep, loss of mental focus, forgetfulness, decreased alertness as well as withdrawal from family and friends among others (Antai, Udezi, Ekanem, Okon, & Umoiyoho, 2004). Other common indicators of premenstrual tension include physical symptoms, such as chest pain, swelling of extremities, abdominal pain, joint or muscle pain, back pain, frequent urination, weight gain, nausea, abdominal bloating, breast tenderness, water retention, acne/puffy face, nipples discharge, fatigue, and headache. Other indicators are: social withdrawal, personal clashes, reduced interest in social relationships and school, change in appetite (over eating or little appetite), difficulty in sleeping (insomnia), oversleeping, reduced concentration and lethargy (Sarkar, Mandal & Ghorai, 2016). Premenstrual tension can be a devastating problem to the extent that it brings about consequences such as, missing classes, tests, decline in school attendance, academic performance, interpersonal relationships, social interactions and emotional well-being during luteal phase of the menstrual cycle (Abirami & Ambika, 2017). Ultimately, this can be inimical to the psychosocial development and general well-being of adolescent girls.

The c issues regarding premenstrual tension do not only appear gloomy but also highlight a number of psychosocial problems which demand a clear understanding of the nature of the individuals under scrutiny in this study. Adolescence is characterized by emotional

insecurity during which the body and mind go through many complex changes, which may be difficult to deal with (Osarenren, 2002). Adolescence is also unquestionably the most turbulent phase of human development (Nwadinigwe, 2004). This stage in the life of an individual may be encumbered with several challenges and premenstrual tension is an addition which may jeopardize psychosocial adjustment of these adolescents if not addressed. Therefore, the consequence of not alleviating the effects of premenstrual tension at adolescence may have far reaching consequences on overall well-being of such adolescents due to psychosocial effects like depression and anxiety among others. These effects may inevitably extend to adulthood. It might also cause impairments to mental health, as well as compromise the prospect of living gratifying lives in adulthood. The indicators of premenstrual tension include, but are not limited to depression, anxiety, moodiness, anger outburst, and low self-esteem.

Depression is characterized by loss of self-worth, feelings of frustration, lack of motivation, inability to perform social obligations, and general disinterest in socializing. Depression is reported to be the ninth leading source of illness and disability among adolescents triggering complications such as withdrawal from family and peers (WHO, 2018). Though there is limited study on premenstrual tension induced depression, a significant relationship exists between the risk of depression and premenstrual scores for depression, anxiety, fatigue and irritability. Depression can be wearying for adolescents to the extent that it can affect their daily involvement in ordinary activities due to loss of interest and lethargy even at mild levels (Acikgoz, Dayi, & Bimbay, 2017).

The condition is also associated with anxiety which is reported to be the eighth leading cause of illness and disability among adolescents (WHO, 2018). It is a feeling of restlessness, nervousness and tension, experienced by adolescents during menstrual cycle. Though there are limited studies on premenstrual tension provoked anxiety, adolescents suffering from anxiety are inclined to the risk of unemployment, maladjustment, poor coping skills and alcohol abuse/dependence in adulthood (Essau, Lewisohn, Olaya & Seeley, 2014). In like manner, low self-esteem, moodiness and anger outburst could be psychosocially debilitating. Premenstrual tension can affect self-esteem which could lead to lack of confidence, negative view of life, blaming behaviour, fear of being ridiculed, fear of taking appropriate risks, distorted view of self and others, mistrusting others inappropriately and dependence on others to make decisions. It was observed that difficulty in performing school functions and decreased self-esteem were the two most adversely affected parameters of premenstrual tension in adolescent girls (Rizk, Mosallam, Alyan, & Nagelkerke, 2006). This situation can predispose such individuals to

frustration and anger. Anger outburst is an intimidating behaviour that can damage relationships especially if unprovoked; it can also alienate an individual from friends and family even in the absence of violence. It becomes problematic if it is frequent or leads to inappropriate expressions of anger (Nathan, Rees, Lim & Correia, 2003).Premenstrual tension interferes negatively with behaviour, school work, academic performance, social activities, social interactions and quality of life (Chau & Chang, 1999). Its effects during the teen years could complicate the process of puberty as it affects interpersonal relationships, social and educational performance of adolescents in a negative way, resulting in poor self-esteem and a sense of dissatisfaction (Taghizadeh, Shirmohammadi, Arbabi, & Mehran, 2008).

Adolescents with premenstrual tension experience unpredictable kind of behaviour which they rarely recognize as premenstrual syndrome. They may also be inexperienced and unacquainted with the indicators of the condition. Hence, a majority of adolescent girls suffer from premenstrual tension and do not disclose their experiences due to shyness, ignorance, social, religious and psychological factors (Mumtaz, Roohi & Iqbal, 2018). These adolescents are said to be in poor mental health according to Rad, Sabzevary and Dehnavi (2018). This can be a substantial burden on a teenage girl. Therefore, ignoring premenstrual tension in adolescents can have adverse effects on the well-being of such adolescents. This is bothersome because adolescents' psychosocial wellbeing is crucial to the achievement of the sustainable development goals 2015-2030 regarding mental health among adolescents and their education. Furthermore, adolescents' well-being remains neglected, despite evidence of investments in most countries and till now, adolescence remains a life period when many face great risks (WHO, 2018). This is worrisome because prevalence of premenstrual tension is 85% in Africa (Direkvand-Moghadama, Sayehmiri, Delpisheh, & KaiKhavandi, 2015). A prevalence of 14–88% has also been reported amongst adolescents in Nigeria (Fiebai, Ukueku, & Ogu, 2018). This statistics show that premenstrual tension appears to be extensive in Nigeria.

Various attempts had been made to address the problem of premenstrual tension. These include pharmacotherapy through the use of a drug called serotonin and similar antidepressant drugs. However, these drugs produce side effects such as nausea, fatigue, insomnia, self-harm and suicidal ideation, which are unpalatable (Scahill, Hamrin & Pachler, 2005). This implies that adolescent school girls need to be assisted through other therapies by recognizing their premenstrual problems early and giving them management skills regarding the psychosocial effects of premenstrual tension. Fortunately, psychotherapy is potentially beneficial and is recommended in managing premenstrual

tension since it can reduce post-test mean scores on premenstrual tension symptoms in females (Malik & Bhat, 2018). Adolescent friendly interventions such as activity schedule and anticipation training, which are CBT based techniques and offered by trained psychotherapists like counsellors can be considered (Bamidele, 2010). A previous study showed that activity schedule and anticipation training were effective in reducing depression and anxiety in adolescents (Olusakin & Bamidele, 2011), These counselling strategies might be helpful to ameliorating the psychosocial effects of premenstrual tension'

The goal of activity schedule is to increase contact with the environment in a positively reinforcing and realistically attainable way, so as to generate positive feelings through pleasurable activities. These activities help clients feel better, less tired and can help them think more clearly by giving a different perspective on particular problems being experienced by individuals (Boyes, 2012). While anticipation training is a treatment that teaches individuals to futuristically wait and eagerly expect something pleasant to happen. It is a skill which involves considering scenarios that might happen in the next few days or weeks and prepares an individual to respond skilfully to situations and experiences. Anticipation training involves looking forward to an expectant occurrence or waiting for some pleasant events by the distressed. It involves dwelling on futuristic happenings which creates a good feeling, takes the focus of the distressed off a present gloomy state and improves mood (Bamidele, 2010).

Statement of the problem

Though adolescence is a crucial phase in the growth and development of an individual, it is characterized with emotional instability, conflicts and difficulties regarding feminine social roles and self-identity. Hence, premenstrual tension can make life more challenging for a female adolescent with the condition. The condition presents psychosocial properties such as depression, anxiety, low self-esteem, moodiness and anger outburst among others. It affects how students approach school work in general and their relationship with people. Students who are not motivated might find it difficult to attain and sustain good academic achievements. When these aforementioned effects on adolescent girls are well thought-out, premenstrual tension is an added threat towards a successful academic pursuit and transition to womanhood. This is because it could complicate the period of puberty for the distressed. The consequential effects of premenstrual tension include interpersonal skills difficulties, poor social adjustment, dissatisfaction with significant others, lower efficiency, lower psychosocial well-being

and reduced productivity. This is critical because adolescent girls are would-be wives and mothers in the future. Furthermore, constant rise and fall in moods can seriously impact students' ability to study and perform well academically. This is a problem because anxiety, depressed mood, fatigability, hopelessness, anger outburst, low self-esteem and irritability can lead to severe depreciation at school work, social activities and relationships. In future, such adolescent girls might also be unable to manage their marital relationships successfully as marital conflicts during the luteal phase of their menstrual cycle could lead to spousal abuse or physical conflicts which may aggravate to spousal death. The researcher is interested in the effectiveness of activity schedule and anticipation training as alternative interventions in managing adolescents with premenstrual tension instead of pharmacology since it has no side effects and addresses the psychosocial aspects of the condition.

Purpose of the Study

The study sought to examine the impact of Activity Schedule and Anticipation Training as counselling strategies in alleviating psychosocial effects of premenstrual tension among female adolescents in some selected secondary schools in Lagos State, Nigeria. Specifically the study aimed to:

1. Investigated the post-test mean scores of premenstrual tension among participants exposed to Activity Schedule, Anticipation Training and Control conditions.

Research Question

This study was guided by the following question:

1. What is the difference in the post-test mean scores in premenstrual tension among participants in activity schedule, anticipation training and control groups?

Research Hypothesis

One hypothesis was raised as follows:

1. There is no significant difference in the post-test mean scores in premenstrual tension among participants in activity schedule, anticipation training and control groups.

Area of the Study

The research was carried out in Lagos State, South-Western Nigeria. Adolescents in public senior secondary schools are easily accessible in the area. Lagos state is located in South-West Nigeria and bounded by Ogun State to the east and north while in the south, she adjourns the Atlantic Ocean. Lagos is highly-heterogeneous in composition with a population of over 20 million people. ( ). It is the commercial nerve centre of the country. It has twenty Local Government Areas and six Education Districts. Lagos is densely populated with a large population of adolescents as well availability of many senior secondary schools. Lagos is appropriate because the problem exists and is prevalent among adolescents in the state (Ogebe et al. 2011). The state is also a familiar environment for the researcher with added advantage of accessibility

Methodology

The study adopted the quasi experimental pre-test/post-test control group research design. Activity Schedule and Anticipation Training counselling strategies were used as interventions to manage premenstrual tension experienced by adolescent school girls. The Premenstrual Symptoms Screening Tool for Adolescents (PSST-A) was adopted and used for data collection. It is a simple, reliable and user friendly tool to screen for premenstrual symptoms in adolescents as defined by the Diagnostic and Statistical Manual of Mental Disorders, fourth edition [DSM-IV] (American Psychiatric Association, 2000; Steiner, Macdougall, & Brown, 2003). PSST-A comprised two sections with 14 and 5 items respectively. The questions pertained to educational activities and interpersonal relationships; severity of the premenstrual tension was rated by participants based on how it affected their daily routine and was categorized into mild, moderate and severe. The items enabled the researcher to gather relevant data to test the research hypothesis. The reliability coefficient was obtained using Cronbach's co-efficient alpha (0.796). The data collected were analysed and the hypothesis was tested with the use of mean, standard deviation and analysis of covariance statistics (ANCOVA) to ascertain if a significant difference exists in the post-test scores of premenstrual tension experienced by the participants after intervention. The participants in control group were not given any treatment. All groups were given baseline assessment to isolate the unique features in the population for the study. The three groups were pre-tested and post-tested in order to determine the effects of the experimental conditions. The population comprised all girls' only public senior secondary school students in Lagos State. Specifically, participants comprised all identifiable students with premenstrual tension.

To determine the baseline, the Premenstrual Syndrome Scale (PMSS) was administered on all available senior secondary two students (SS2) in the three selected schools to isolate adolescents with premenstrual tension. Participants with a score of 132 and above in the PMSS were randomly selected for the study. In addition, eligible participants for the study had regular menstruation, were not taking any medicine for the condition, were not suffering from or treating any condition that shared similar symptoms with premenstrual tension and had symptoms which started prior to menses and stopped within few days of menstruating. All the aforementioned criteria were ascertained through the bio-data section attached to the PSST-A. Parental consents were also obtained for inclusion in the program. The three schools were randomly assigned to the activity schedule, anticipation training or the control condition

Administration of the treatment / Instruments

All the instruments were administered in the three selected schools. The pre-assessment instruments were administered to 105 students who also completed the post-test assessments. The research was carried out over a total of eight weeks. One week each was used for pre-tests and post-tests respectively, while six weeks were spent on the actual experiments.

Pilot Study

Prior to the main study, a pilot study was carried out by the researcher to determine the psychometric properties of instruments and identify possible challenges which could arise before embarking on the main study.15 participants out of the isolated SS2 girls were randomly selected to participate. The pilot study also helped in determining the readability of the questionnaires and in identifying potential problems in data collection.The reliability and validity of the instrument was established. The stability of the instrument was determined over a period of two weeks in which the researcher administered all the instruments twice to the same set of participants.

Recruitment and Training of Research Assistants

Three research assistants were appointed and trained by the researcher for effective data collection. The objectives of the study were explained to the research assistants and they were trained for two hours, twice in a week on how to administer and score the instruments

Treatment Procedure

The study was carried out in three phases:

Phase One: Pre-Intervention Assessment

In the first week of contact with the participants, the researcher, assisted by the research assistants, administered the Premenstrual Symptoms Screening Tool for Adolescents (PSST-A) to all the participants in the three experimental groups as pre-test prior to commencement of treatment.

Phase Two: Intervention

The sampled groups for the study were randomly assigned to intervention and control groups. The two intervention groups met once a week for six weeks for a minimum of one hour for a session per week. The control group was on the waiting list.

Phase Three: Post Intervention Assessment

After the intervention sessions which lasted six weeks, Premenstrual Symptoms Screening Tool for Adolescents (PSST-A), was re-administered to the participants in the three experimental groups. This was to find out if the experimental conditions provided a change in the dependent measures. The participants in Activity Schedule and Anticipation Training affirmed that they felt better as a result of the interventions.

Data Analysis

Hypothesis One:

There is no significant difference in the post-test scores in premenstrual tension among participants in activity schedule, anticipation training and those in control group. In order to test the hypothesis, analysis of covariance was used. The results are presented in Tables 1, 2 and 3

Table 1: Descriptive Data on Pre and Post–test mean scores on participants exposed to activity schedule, anticipation training and control group

Experimental Groups	**N**	**Pre-test Scores**		**Post-Test Scores**		**Mean difference**
		Mean	**S.D**	**Mean**	**S.D**	
Activity schedule	35	32.9	4.55	23.80	4.45	9.11
Anticipation	35	36.40	7.23	29.09	5.82	7.31
training	35	32.89	8.87	30.11	8.19	2.78
Control groups	105	34.07	7.23	27.67	6.87	20.8
Total						

It shows that after the post-test, the Activity Schedule group recorded the greatest improvement/reduction in the premenstrual tension with a mean difference of -9.11 followed by the Anticipation Training group with a mean difference of -7.31, while the Control Group has a slight reduction with the mean difference of -2.78. To determine whether a significant difference exists in the post-test scores on premenstrual tension among the participants due to the interventions, analysis of covariance (ANCOVA) was done. The result is presented in Table 2

Table 2: One-Way Analysis of Covariance (ANCOVA) on the difference in premenstrual tension among participants

	Experimental Method					
Source of Variation	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**B**
Main Effects with Covariates (Combined)	3884.004	3	1294.668	127.531	.000	
Experimental Group	709.911	2	354.956	34.965	.000	
Covariate - Premenstrual Tension (Pre-test)	3080.557	1	3080.557	303.450	.000	.773
Model	3884.004	3	1294.668	127.531	.000	
Residual	1025.329	101	10.152			
Total	4909.333	104	47.205			

*Significant, P < 0.05 level; F critical (1, 101) = 4.00; F critical (2, 101) = 3.15

The result shows that a calculated F-value of 34.965 resulted as the difference in premenstrual tension across experimental groups. This calculated F-value is statistically significant since it is greater than the critical F-value of 3.15, $p<0.05$ given 1 and 101 degrees of freedom at 0. 05 level of significance. Therefore, hypothesis 1 was rejected. This implies that the experimental effects actually accounted for the observed changes in the dependent measure. This indicates that both treatments are effective in reducing participants' premenstrual tension. Since the above ANCOVA table reveals that there is significant difference across the experimental groups, it becomes very important to find out the more effective of the counselling strategies. This led to the use of fisher's protected t-test. The result of the post-hoc analysis is presented in Table 3.

Table 3: Fisher's protected t-test on difference in premenstrual tension experienced by adolescent school girls in the three experimental groups

Groups	Activity Schedule (35)	Anticipation Training (35)	Control (35)
Activity Schedule	23.80[a]	-3.17*	-3.78*
Anticipation Training	-5.29	29.09 [a]	-0.61
Control Group	-6.31	-1.02	30.11 [a]

*Significant at 0.05; a = group means are in diagonal; difference in interventions group means are below the diagonal while the protected t-values are above the diagonal.

The pair-wise comparison in Table 3 shows that participants exposed to activity schedule manifested significant reduction in premenstrual tension than those exposed to Anticipation training ($t = 3.17$; $df = 68$; critical $t = 2.00$; $P < 0.05$). Similarly, participants exposed to Activity schedule significantly manifested less premenstrual tension than those in the control group ($t = 3.78$; $df = 68$; critical $t = 2.00$; $P < 0.05$). It was observed that though activity schedule and anticipation training were effective in reducing the premenstrual tension of the participants, Activity schedule was more effective. The control group do not improve in premenstrual tension when compared with participants exposed to Activity Schedule and Anticipation Training.

Discussions

The occurrence of premenstrual tension is one of the most common menstrual complaints among females of reproductive age. Menstrual related problems among adolescent school girls make up an important aspect of adolescent health (Ravi, Shah, Palani, Edwards & Sathiyasekaran, 2016). Premenstrual tension is associated with significant burden on quality of life in adolescents. In addition, increase in severity of premenstrual tension symptoms results in decreased quality of mental health and vitality. (Taghizadeh, Shirmohammadi, Arbabi, & Mehran, 2008)

This study provides new information which had not been available in literature regarding Nigerian adolescent school girls and the effect of psychotherapy based randomized controlled trial on the use of AS and AT to alleviate premenstrual tension effects. This section presents a discussion of the results of the tested null hypothesis as follows:

The finding revealed that there was significant difference in the post-test mean scores on premenstrual tension across experimental groups exposed to treatment and control. The reasons for the difference could be attributed to the intervention of Activity Schedule and Anticipation Training. The improvement of premenstrual tension after Activity Schedule and Anticipation Training strategies is in line previous researches. This result is consistent with Janita, Chau & Chang (1999) who evidenced a decrease in the total premenstrual tension scores when they investigated the effects of an educational programme on adolescents with premenstrual tension. Other studies also show the efficacy of psychotherapy (group cognitive-behavioral therapy) to effectively alleviate premenstrual tension symptoms in female college undergraduate students. These results are in agreement with similar studies carried out by Hofmann, Asnaani, Vonk, Sawyer & Fang, 2012; Taghizadeh, Shirmohammadi, Mirmohammadali, Arbabi & Haghani, 2010; Nazari et al., 2011; Mirzaei, Neshatdoost, Kalantari & Mahani 2012; Maddineshat, Keyvanloo, Lashkardoost, Arki, & Tabatabae-Ichehr, 2016

Moreover, feedback received from participants in the activity schedule and anticipation-training groups further confirmed that the management strategies ameliorated the effects of premenstrual tension among participants in the ASS and ATS only.

Conclusion

Based on the findings of this study, Activity Schedule and Anticipation Training are effective, adolescent- friendly, simple and practicable in alleviating premenstrual tension among adolescent school girls.

Recommendations

Based on the findings of this study, the following recommendations are made:

School counsellors and psychologists should offer effective coping skills to deal with the challenges of the premenstrual tension.

Teachers' understanding of students' psychosocial challenges regarding premenstrual tension in a classroom setting should be enhanced.

People should be enlightened about the implications of premenstrual tension on female adolescents as well as interventions such as activity schedule and anticipation training strategies, which are effective in ameliorating its effects.

Guidance counsellors should organize programmes to educate female preteens and teens on the condition as well as the techniques for relieving the effects of premenstrual tension

A research on the effectiveness of ASS and ATS on married women may be carried out by a researcher in future.

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