RESEARCH ARTICLE

A COMPARATIVE STUDY OF ANXIETY AND DEPRESSION AMONG ADOLESCENTS, POSTPARTUM AND MENOPAUSAL WOMEN OF RURAL AND URBAN AREAS

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ABSTRACT

Introduction: The fact that women play various roles in life, considering their life quality and mental health is an effective step for strengthening family and community foundations. In specific groups like adolescence, postpartum and menopausal women have psychiatric illness like Anxiety and Depression significantly high where there is significant hormonal disturbances. It is a randomized comparative study between three groups. **Aims & Objectives:** The study is aimed to identify the prevalence of Anxiety and Depression in adolescent girls, postpartum women and menopausal women attending outpatient clinic in NRIIMS, Sangivalasa using HAD's scale. Once prevalence is identified, the next aim is to identify the cause of Anxiety and Depression. To establish high scale counseling sessions in the Adolescent and menopausal clinics of NRIIMS. **Methodology:** The study was a prospective randomized survey among adolescent girls, postpartum women and menopausal women. Data collection was done by instant messaging applications. Survey was conducted from August 2019-September 2020. Total number of subjects are 100 among which 35 are menopausal women, 35 are postpartum women and 30 are adolescent girls. **Results:** The prevalence of anxiety (35%) is more than depression (33%) in study population. Among 3 groups, anxiety is more in postpartum women(37%) , compared to menopausal women(34%) and adolescent girls(33.3%) . Whereas Depression is seen in 40% highest among menopausal women compared to adolescent girls (36.6%) and postpartum women (22.8%). **Conclusion:** The study emphasizes the need for extensive awareness, identification and to provide specialised psychiatric services to overcome the mental health diseases among vulnerable age groups in women. Thereby strengthening and improving their quality of life.

INTRODUCTION

The period between 10 to 19 years (*WHO)* is the time of development of all the systems like skeletal, muscular, endocrinal and marked acceleration in size & contour of the body. Anxiety and depression are the most common maladaptive responses of present day stressful existence. The fact that women play various roles in life, considering their life quality and mental health is an effective step for strengthening family and community foundations. In specific age groups like adolescence, postpartum and menopausal women have psychiatric illness like Anxiety and Depression significantly high. Adolescents are generally perceived as a healthy age group, and yet 20% of them, in any given period, experience a mental health problem, most commonly depression or anxiety. In many settings, suicide is among the leading cause of death in young people. In this context, in India particularly, adolescents are put under pressure to perform well in school examinations. For some students, the experience of academic stress leads to a sense of distress, which is generally manifested in a variety of psychological and behavioral problems. The experience of academic stress and adolescent distress has been identified and explored by researchers in Korea and Japan [6]. It is relevant to mention here that in India, in the year 2011 alone, 2381 children, or more than six children per day, committed suicide because of failure in examinations [7]. Depression among students represents a neglected public health problem in India. It is very important to prevent the ill effects of depression on one's educational attainment and career through early detection and proper interventional measures. Few studies have been conducted at a global level to assess the prevalence of depression among students. All these studies have been conducted in western countries as well as in other parts of the world. In India, epidemiological studies on depression among adolescent students are scanty. Clearly, depression in this age group is of paramount importance and warrants serious study. Early onset

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depression among adolescent students interferes with psychological, social, and academic functioning, placing him or her at greater risk for problems such as substance abuse and suicidal behavior. The high rate of depression among students is associated with numerous factors. A variety of factors which include their educational life, social factors like alcohol use, drug addiction, family problems, family history of depression, and staying away from home were associated with depression among students. Studies of such nature will be a useful tool to take appropriate steps like counseling for the depressed students.

Hence, this study was undertaken to find out the transition in age, gender and background i.e rural or urban affecting the anxiety and depression among the adolescents. The study is aimed to identify the prevalence of Anxiety and Depression in adolescent girls, postpartum women and menopausal women attending outpatient clinic in NRIIMS, Sangivalasa using HAD's scale. Once prevalence is identified, the next aim is to identify the cause of Anxiety and Depression. The study was a prospective randomized survey among adolescent girls, postpartum women and menopausal women

MATERIALS AND METHODS

Selection of subjects: The first study was conducted in two subject groups.1.Adolescent girls, 2. Menopausal women. .A total of 368 adolescents were selected from high schools and colleges in both rural and urban area of Visakhapatnam. A total of 289 adolescents were selected from high schools of Desapatrunipalem, and Parawada around Vizag steel plant area. A total of 79 were from different colleges of Visakhapatnam city. For the second study data collection was done by instant messaging applications(due to covid 19). Survey was conduct from August 2019- September 2020 . Total number of subjects are 100,among which 35 are menopausal women, 35 are postpartum women, 30 adolescents.

Measurement of Anxiety and Depression: The Hospital anxiety depression scale (H.A.D.'SCALE) is used to asses anxiety and depression in three groups which they develop during these stages. The same scale was given to adolescents, Postnatal and Menopausal women of both rural and urban areas. A score of 0-7 is considered to be normal while a score >11 is considered to be a clinical condition of Anxiety and Depression.

The four important advantages with the HAD Score are

) Independent of Physical symptoms.
) The extents to which its item robustly measure the identified contents with varying clinical population and situations.
) Its capability to differentiate anxiety and depression
) The case of administration and acceptability of this measure to ill and meek respondents

The scale is used to know whether there is any influence of change of environment from school to college. For those who are having the scores which indicate anxiety or depression, they were advised counseling and Jacobson's relaxation exercises. The proforma was given and advised students to fill up individually. The score was calculated and results tabulated. There was a substantial improvement clinically immediately especially those who were going for examinations. But to assess by same score it needs some more time ie. A minimum period of one year. This study will help us to know that the maladaptation may be the cause for suicidal tendencies and unable to fare well in examinations when there is a change in environment. The statistical methods applied are SE Error of difference between two means, chi-square and correlation test applied along with MS Office exile and power point to analyze the data and diagrams. For Menopausal women HAD'S questionnaire was sent by whatsapp messages and data collected and analysed. (Due to covid19). The study is conducted on small sample as a preliminary study in second group. Results tabulated.

The Women Health Questionnaire and the Menopause Representation Questionnaire (both translated and linguistically validated in Hindi) were used to examine the prevalence of physical and emotional symptoms and the extent to which these were attributed to the menopause. In our study the questionnaire was given in Telugu and English .

RESULTS AND DISCUSSION

The mean age of the rural boys was found to be 13.47 ± 0.99. While the mean age of urban boys was 17.87 ± 0.83. Similarly the mean age of the girls in rural area was observed to be 13.46 ± 1.2 while the mean age of urban girls was 17.49 ± 0.57 years. In rural area majority of boys (82.9%) and girls (74.65%) were in the age group of 13 to 15 years.

In Urban area majority of boys (85.71%) and girls (96.1 %) were in the age group of 16 to 18 years (Table.1) Table No. 2 reveals that Anxiety is present in both boys as well as girls. Greater % of Boys in general were found to have Anxiety when compared to girls in both rural and urban areas. In rural area, 22.3% of boys were found to have anxiety while only 17.38% of girls had anxiety. In urban area, 35.71 % of boys were found to have anxiety while only 29.41 % of girls had anxiety.
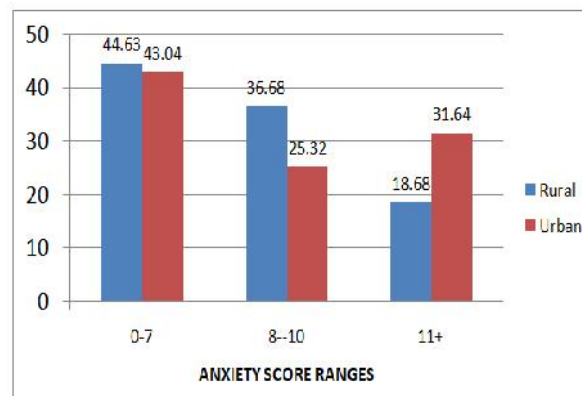

Fig. 1. % of adolescents in rural and urban areas with different ranges of anxiety scores
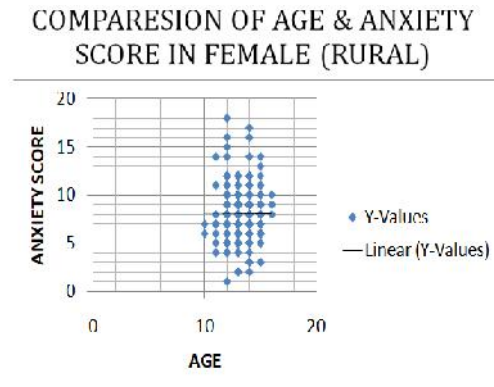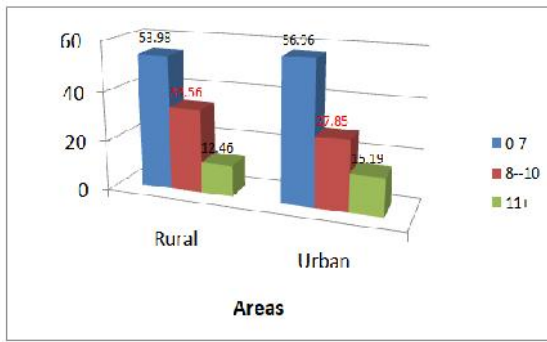
Fig. 2. % of adolescents in rural and urban areas with different ranges of Depression scores

Table No.1 Distribution of study population according to Age &Gender

	RURAL			URBAN		
Age Group	Boys	Girls	Total	Boys	Girls	Total
10-12	13 (17.10)	51 (23.94)	64	----	----	----
13-15	63 (82.90)	159 (74.65)	222	----	----	----
16-18	------	03 (1.41)	03	24 (85.71)	49 (96.10)	73
19-21	------	-----	00	04 (14.29)	02 (3.90)	06

Table No.2 % of Boys& Girls in rural and urban areas with different ranges of anxiety scores

Anxiety Scores	RURAL		URBAN	
Score Ranges	Boys	Girls	Boys	Girls
0-7	31 (40.79)	98 (46.00)	12 (42.86)	22 (43.14)
8-10	26 (36.84)	78 (36.62)	06 (21.43)	14 (27.45)
11 & above	17 (22.37)	37 (17.38)	10 (35.71)	15 (29.41)
Total	76 (100.0)	213 (100.0)	28 (100.0)	51 (100.0)

**Table No. 3% of Boys & Girls in rural and urban areas with different ranges of Depression scores**

Depression Scores	RURAL		URBAN	
Score Ranges	Boys	Girls	Boys	Girls
1. 0-7	53 (69.74)	103 (48.36)	15 (53.57)	30 (58.83)
2. 8-10	20 (26.31)	77 (36.15)	08 (28.57)	14 (27.45)
3. 11 & above	03 (3.95)	33 (15.49)	05 (17.86)	07 (13.72)
Total	76 (100.0)	213 (100.0)	28 (100.0)	51 (100.0)

Table No.4. Relationship between age and anxiety scores in rural male (n = 76)

Parameters		Values
1.	Sample size	76
2.	r value	0.095
3.	t value	0.83
4.	P value	0.4143 (Not significant)
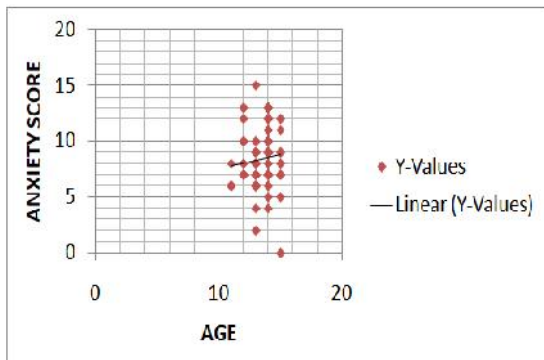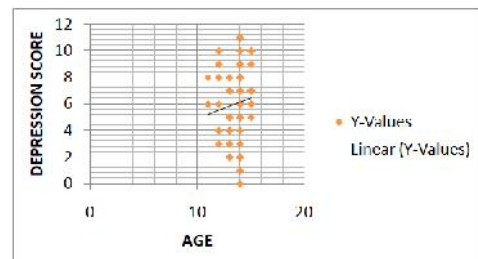
Table No.5. Relationship between age and anxiety scores in rural female (n = 213)

Parameters		Values
1.	Sample size	213
2.	r value	-0.010
3.	t value	0.146
4.	P value	0.8846 (Not significant)

More % of Adolescents found to be having anxiety in urban areas in comparison to rural areas (Fig.1.). Though there was difference found in both areas and sexes in case of scores, it is not found to be significant. $(x)^2$ value is 8.12 with 6

COMPARESION OF AGE & DEPRESSION SCORE IN FEMALE (RURAL)

COMPARESION OF AGE & ANXIETY SCORE IN MALE (URBAN)

Table No.6. Relationship between age and Depression scores in rural male.(n = 76)

	Parameters	Values
1.	Sample size	76
2.	r value	0.119
3.	t value	1.034
4.	P value	0.3059 (Not significant)

Table No.7. Relationship between age and Depression scores in rural female (n = 76)

	Parameters	Values
1.	Sample size	76
2.	r value	-0.20
3.	t value	-2.96
4.	P value	0.0034(significant)

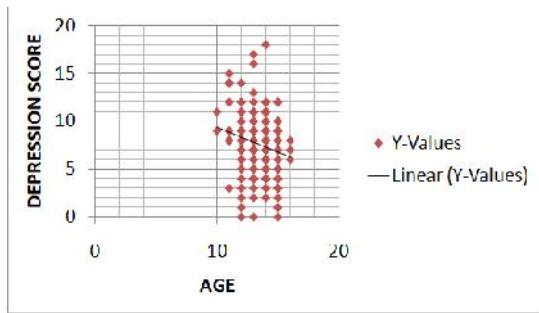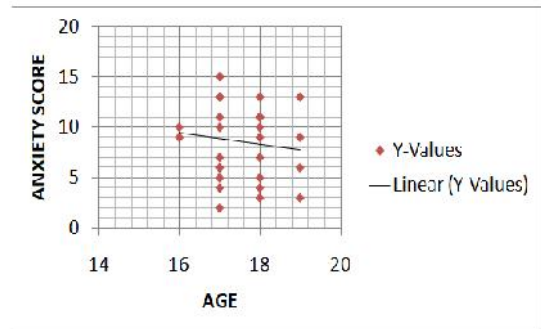COMPARESION OF AGE & ANXIETY SCORE IN FEMALE (URBAN)
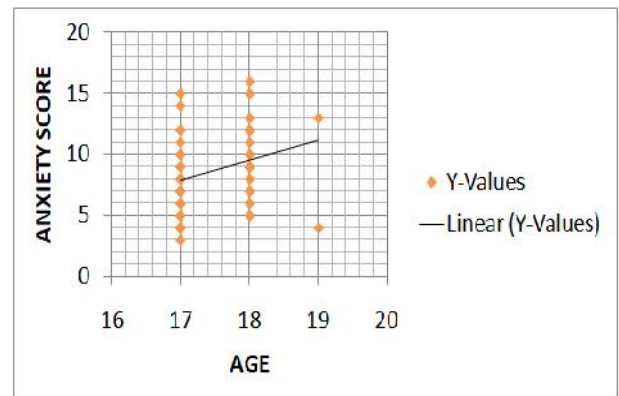
degrees of freedom, $P > 0.05$ (P value is 0.187976). 15.19 % of people in urban area are found to be having depression followed by 12.46 percentage in rural area. In case of gender 15.49 percent of girls in rural area are having depression followed by 17.86 percent of boys in urban area is having depression.$(x)^2$ test value is 13.54 with 6 d.f, $P < 0.05$(P value = 0.035674) is significant. Depression seems to be significant in both the areas and sexes.

Table.10. Relationship between age and depression scores in urban male (n = 28)

	Parameters	Values
1.	Sample size	28
2.	r value	0.10
3.	t value	0.51
4.	P value	0.6126 (Not significant)

Table. No.8. Relationship between age and anxiety scores in urban male (n = 28)

	Parameters	Values
1.	Sample size	76
2.	r value	-0.12
3.	t value	-0.62
4.	P value	0.5430(Not significant)

Table.No.9. Relationship between age and anxiety scores in urban female (n = 51)

	Parameters	Values
1.	Sample size	76
2.	r value	0.28
3.	t value	2
4.	P value	0.0466 (significant)

Correlation applied to find the relationship between age and depression scores in rural male found that the r value is 0.119 is not a significant value; there is no strong positive relationship between two variables $P > 0.05$.

Correlation applied to find the relationship between age and anxiety scores found that there is no strong positive relationship between two variables $P > 0.05$.

Correlation applied to find the relationship between age and anxiety scores in females found that the r value is -0.010 is not a significant value, there is no strong negative relationship between two variables $P > 0.05$.

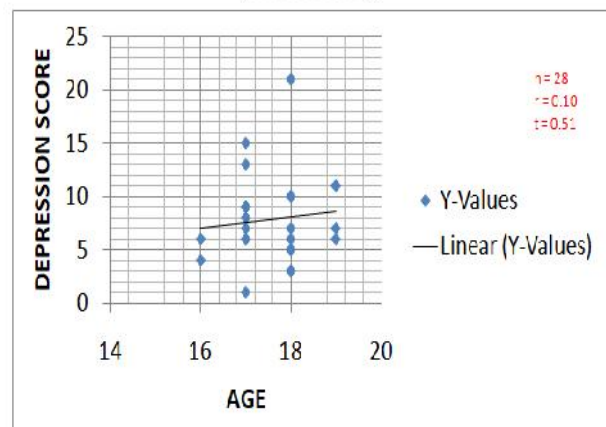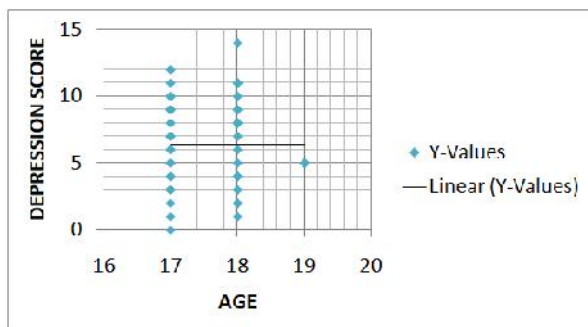COMPARESION OF AGE & DEPRESSION SCORE IN MALE (URBAN)

Table.11. Relationship between age and depression scores in urban female (n = 51)

Parameters		Values
1.	Sample size	51
2.	r value	0.0010
3.	t value	0.0070
4.	P value	P > 0.05 (Not significant)

COMPARESION OF AGE & DEPRESSION SCORE IN FEMALE (URBAN

Correlation applied to find the relationship between age and depression scores in rural female found that the r value is -0.20 is a significant value; there is a strong negative relationship between two variables P < 0.01 .the depression scores in rural female is reducing ,while increasing age. Correlation applied to find the relationship between age and anxiety scores in urban male found that the r value is -0.12 is not a significant value; there is no strong negative relationship between two variables P > 0.05.the anxiety scores in urban male is reducing, while increasing age is not a significant result. P> 0.05. Correlation applied to find the relationship between age and anxiety scores in urban female found that the r value is 0.28 is a significant value; there is positive relationship between two variables P < 0.05. The anxiety scores in urban female is increasing, while increasing age is a significant result. P< 0.05 Correlation applied to find the relationship between age and depression scores in urban male found that the r value is 0.10 is not a significant value; there is positive relationship between two variables P > 0.05. The depression scores in urban male is increasing, while increasing in age is not a significant result. P< 0.05. Correlation applied to find the relationship between age and depression scores in urban female found that the r value is 0.0010 is not a significant value; there is no relationship between two variables P > 0.05. There is no relationship between depression scores and age of in urban female. Results of second group: The prevalence of anxiety (35%) is more than depression (33%) in study population. Among 3 groups, anxiety is more in postpartum women(37%) , compared to menopausal women(34%) and adolescent girls(33.3%) . Whereas Depression is seen in 40% highest among menopausal women compared to adolescent girls (36.6%) and postpartum women (22.8%). The p value is not done as sample is small .This needs further studies which are in progress. (Our study is comparable the study done by Entisar Yoisef Smadi from Jordan, published in Canadian Social Science ,Vol-13,No-2 ,2017 ,pp-71-77). The results of the second study groups of adolescent girls, postpartum women and menopausal women conducted at Anil Neerukonda Hospital are as follows .The prevalence of anxiety (35%) is more than depression (33%) in study population. Among 3 groups, anxiety is more in postpartum women (37%)

, compared to menopausal women (34%) and adolescent girls(33.3%) . Whereas Depression is seen in 40% highest among menopausal women compared to adolescent girls (36.6%) and postpartum women (22.8%).

DISCUSSION

Aging is important part of life .Aging women often find themselves either ignored, pitied or feared which is why most women are very concerned with the ageing factor. The effect of aging is seen more in middle aged women as they are on the edge of change from young to old age. They feel the age is slipping from their hands. Anxiety is a normal experience, which although unpleasant, is harmless. Symptoms are: Feeling nervous or on edge, an increased heart rate, shortness of breath, a dry mouth, trembling, sweating, nausea, light-headedness and thinking that something bad is going to happen. Although unpleasant, anxiety can actually be very helpful. In fact, it can warn and protect us when we are in danger. Anyone feels anxious standing on the edge of a cliff without any barriers. The feeling of anxiety motivates to move away from the edge, or be very careful if remaining on the edge. Therefore, anxiety alerts to possible danger and prepares the body to respond to the danger. This is known as the "fight-or flight" response (Brosan *et al*, 2010).

Depression: The word depression is used to describe a range of moods from low spirits to a severe problem that interferes with everyday life. The experience of depression is an overwhelming feeling which can make you feel quite unable to cope, and hopeless about the future. Depressed person faced difficulty sleeping or getting up, may feel overwhelmed by guilt, and may even find thinking about death or suicide (Borrill, 2000). Menopause, the time when a woman stops having menstrual periods, is not a disease or an illness for most women, menopause normally occur between age range 48-55 years. Quality of life, it encompasses several constructs including physical functional emotional social and cognitive variables (Moustafa & others, 2010). Menopause known as "change of life", it is a normal part of a woman's life. It is a point in time of the last menstrual cycle, the last period. The years leading up to that last period, when women might be experiencing menopausal symptoms like changes in their monthly cycles or hot flashes, are called the menopausal transition. It is a common mistake to use the word menopause to describe this whole transition (National Institutes of Health, 2008). There are different scales to study anxiety and depression in menopausal women In some studies they used BECK DEPRESSION SCALE (Ref. Canadian Social Science, Vol-13 , No-2 ,2017,pp-70-77). TRAIT ANXIETY INVENTORY (TAI) In our study we used HADSCALE (Hospital Anxiety Depression Scale). The wide range of symptoms and signs observed in women, which includes, moods wings, depression, anxiety and insomnia apart from physical side effects energy The psychogenic symptoms like trouble sleeping, lack of energy, difficulty in concentration, nervous tension, feelings of sadness. Down heartedness are among the most frequently reported symptoms of the menopausal transition, as hot flushes, sweats. Few studies have combined psychosocial and biomedical models to seek an explanation as to why menopausal symptoms such as these are problematic for some but not all women during menopausal transitional (Bliss, 2005).

Some women react abnormally to menopause and other show depression. Women who have experienced negative life events such as the death of a loved one, illness and marital crises had higher scores on psychological morbidity tests. High levels of stress have also been found to account for the negative mood. Women who experience low or unstable self-esteem often experience feelings of depression or anxiety, and are vulnerable to health problems (Deeks, 2003). Due to the increase in life expectancy, many people are entering menopause .Cross National epidemiological surveys of depression suggest that ,females have double the life time rates of male. A study was conducted on 140 Japanese women aged 44-45 years old by Melissak Melby in Emory University ,USA and National Institute of Health & Nutrition ,Japan .Their results were robust anxiety and depression symptoms by meta analysis which are correlating with other studies like Larroy *et al*. (2015) which show the high percent of Spanish women with these symptoms by HADSCALE and given full training on behavior-cognitive techniques and found reduction in symptoms. We have taken up the study to start training techniques for the women who are attending NRIIMS menopausal clinic. The study by Joyce *et al*. (2014) did a longitudinal analysis from multi-site study on Women's Health Across the Nation (SWAN),whose outcome was high anxiety in contrast to our study ,which showed more cases with depression. An Indian study by Mushtaq (2011) which focused on physical and psychological changes in 100 women ,showed that there is an impact on family in Srinagar city. A self designed questionnaire was used to collect the data. A study by Moustafa *et al*. (2010), assessed the impact of menopausal symptoms on quality of life among 250 women in Qena city which was collected through a questionnaire .This study was conducted on women who are illiterate ,house wives . In their study 3/4th women had poor quality of life and concluded that menopause causes decrease in quality of life. Compared to our study, similar observations are observed in a study identified that more than half of the pregnant women (50.7%) were anxious about their well-being often or all the times. In addition, they were also worried about their other children health (66.7%) as well as the well-being of their unborn child (63.4%) (Corbett *et al*., 2020). These circumstances exert more distress and stressors on the pregnant mothers that might results in adverse maternal mental health outcomes (Fakari and Simbar, 2020).

The Aim of this Study is

⌐ To plan for group counselling programs for peri and Post-menopausal clinic of NRIIMS.

⌐ Evaluate the impact of group counselling and population in future.

⌐ To develop an integrated program to raise awareness of nature of menopausal stage.

⌐ Employing social service centres to provide specialized psychiatric services for women in menopausal stage.

⌐ To conduct extensive studies on large samples of women in menopausal stage to improve psychological and health services for women.

⌐ Raise awareness of the importance of change of diet and lifestyle as they have detrimental impact on their physical and mental wellbeing and make the whole experience less traumatic as well as making the symptoms a great deal less unbearable.

Conclusions

The present study reveals that, there is no strong relationship between age and anxiety scores of rural male pupil. The relationship between age and depression scores in rural female found to be significant. The relationship between age and anxiety scores in urban female were found to be   significant. There is a positive relationship between age and depression score in urban pupil but it is not a significant. Thus from the present study , it can be concluded that   more % of boys have anxiety and depression and it is more in urban areas than in rural areas. Further studies with larger population are required. The promotion of child and adolescent mental health is a worldwide challenge, but a potentially rewarding one.

It is important that Adolescent Friendly Health Services be made an integral part of the health system. Early interventions can provide long-term health and socioeconomic benefits by prevention of the onset of mental health problems and their development into chronic disorders. These issues are even more relevant in India, where the proportion of children and adolescents in the population is high and the resources are scarce. India is currently going through a demographic transition, and intervention today is likely to result in a decreased burden in future. The study emphasizes the need for extensive awareness, identification and to provide specialised psychiatric services to overcome the mental health diseases among vulnerable age groups in women. Thereby strengthening and improving their quality of life

REFERNCES

Lee M, Larson RW: The Korean Examination Hell: Long hours of studying, distress, and depression. J Youth Adolescence.2000, 29:249-272.

National Crime Records Bureau (NCRB): Ministry of Home Affairs, Government of India. Available from: URL: http://www.ncrb.nic.in.

Rao M: Promoting children's emotional well-being. J Public Health Med. 2001, 23(2):168.

United Nations (UN): Department of Economic and Social Affairs, World Population Prospects: The 2008 revision.Availablefrom:URL:http://www.un.org/esa/population/publications/wpp2008/wpp2008_highlights.pdf.

United Nations (UN): Department of Economic and Social Affairs, World Population Prospects: The 2012 revision. Available from: URL: http://esa.un.org/wpp/.

World Health Organization (WHO) meeting report (Geneva 2003): Caring for children and adolescents with mental illness, setting WHO directions. 1-4.

Menopausal symptoms in mid-life women in Southern China

Dr Dongzi Yang, C. J. Haines, Ping Pan, Qingxue Zhang,Yanmei Sun, Shunjia Hong, show all Pages 329-

Mid-Aged Health in Women from the Indian Subcontinent (MAHWIS): a further quantitative and qualitative investigation of experience of menopause in UK Asian women, compared to UK Caucasian women and women living in Delhi

Professor M. S. Hunter, P. Gupta, A. Papitsch-Clark &D. W. SturdeePages 26-37 | Received 06 Jun 2008, Accepted 16 Oct 2008, Published online: 03 Jul 2009
Mid-age health in women from the Indian subcontinent (MAHWIS): general health and the experience of menopause in women Dr. P. Gupta, D. W. Sturdee & M. S. Hunter

The HADS questionnaire

Sl.No.	Description	Sscale	Sl.No.	Description
A	I Feel tense or wound up		A	Worrying thoughts go through my mind
i	Most of the time	3	i	A great deal of the time
ii	Lot of the time	2	ii	A lot of the time
iii	From time to time, occasionally	1	iii	from time to time, but not too often
iv	Not at all	0	iv	only occasionally
D	I still-enjoy the things as I used to enjoy		A	I feel restless as I have to be on the move
i	Definitely as much			
ii	not as much	0	i	Very much indeed
iii	only a little	1	ii	Quite a lot
iv	hardly at all	2	iii	Not very much
		3	iv	Not at all
A	I can sit at ease and feel relaxed		D	I feel cheerful
i	Definitely	0	i	Not at all
ii	Usually	1	ii	Not often
iii	Not often	2	iii	Sometimes
iv	Not at all	3	iv	Most of the time
D	I feel as if I am slowed down		D	•I look forward with enjoyment to things
i	Definitely	0	i	Not at all
ii	Usually	1	ii	Not often
iii	Not often	2	iii	Sometimes
iv	Not at all	3	iv	Most of the time
D	I feel as if I am slowed down		D	•I look forward with enjoyment to things
				•
i	Nearly all the time	3	i	As much as I every did
ii	Very often	2	ii	Rather less than I used to
iii	Sometimes	1	iii	Definitely less than I used to
iv	Not at all	0	iv	•Hardly at all
A	I got a sort of frightened feeling as if		A	I get sudden feeling of panic
	something awful is about to happen		i	Very often indeed
			ii	Quite often
i	very difinitely and quite badly	3	iii	Not very often
ii	yes, but not too badly	2	iv	Not at all
iii	a little but it does worry me	1		
iv	not at all	0	D	I can enjoy a good book or radio or TV
A	I got a sort of frighten feeling like		i	Often
	butterflies in the stomach		ii	Scarcely
			iii	Not often
			iv	Very seldom
i	Not at all	0		
ii	Occasionally	1		
iii	Quite often	2		Scoring
iv	Very often	3		
D	I can laugh and see the funny side of things			0-7 ----Normal
i	As much as I always could	0		
ii	not quite so much	1		8-10----Borderline
iii	definitely not so much now	2		
iv	not at all	3		
				11 and above --Clinical caseness
D	I have lost interest in my appearance			
i	Definitely	3		
ii	I don't take as much case as I should	2		
iii	I may not take quite as much care	1		
iv	•I take just as much care as ever	0		

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