SENSORY PROFILE OF ADULT WOMEN IN REPRODUCTIVE AND POST-REPRODUCTIVE PERIOD IN URBAN AREAS OF JAMMU

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ABSTRACT
The present research work was conducted to measure the sensory processing preferences of women in reproductive and post-reproductive period in the areas including Taste/Smell processing, Movement processing, Visual processing, Touch processing, Activity processing and Auditory processing, to compare the sensory profile of women in reproductive period and post-reproductive period. 150 adult women (75 reproductive and 75 post-reproductive) were selected as a sample for the present study from urban areas of Jammu city. Random sampling technique was used to select the urban areas and from those areas, the sample was selected purposively. It has been revealed that majority of the respondents come under the category of sensory sensitivity in all the five areas of sensory processing except the activity processing area that come under the category of sensation seeking in reproductive and post-reproductive period. Respondents in post-reproductive period had higher mean scores than respondents in reproductive period in the low registration, sensory sensitivity and sensation avoiding indicators whereas mean scores in sensation seeking indicator is higher in reproductive period. The result further depicts significant difference in the sensory processing preferences of women in reproductive and post-reproductive period that is highly significant difference in low registration and sensory sensitivity indicators whereas significant difference in sensation seeking and sensation avoiding indicators. The data on each quadrant indicates that in reproductive period they need intervention in various sensory processing categories. Whereas in post-reproductive period on classification of each quadrant reveals that less number of respondents fall in low registration indicating no need of intervention in this group.

Keywords: Sensory processing, Reproductive period, Post reproductive period

INTRODUCTION
Reproductive health is a state of complete physical, mental and social well-being, and not merely the absence of reproductive disease or infirmity. It is a crucial part of general health and a central feature of human development. It is a reflection of health during childhood, and crucial during
adolescence and adulthood, sets the stage for health beyond the reproductive years for both women and men, and affects the health of the next generation. Reproductive health is a universal concern, but is of special importance for women particularly during the reproductive years. [http://www.un.org/popin/unfpa/taskforce/guide/iatfreph.gdl.html]. Although most reproductive health problems arise during the reproductive years, in old age general health continues to reflect earlier reproductive life events. The reproductive period is the fundamental phase in the growth of a woman. This period gives the sign for the physical growth of a woman and the post reproductive period, is the permanent cessation of reproductive fertility occurring some time before the end of natural lifespan. The term was originally coined to describe the reproductive change in human females, where the end of fertility is traditionally indicated by the permanent stopping of monthly menstruation. In humans, post reproductive period is the time in a woman’s life when her reproductive cycles end.

Sensory processing is a natural process of brain function that all of us experience continually from before we are born. We constantly receive sensory information that allows us to understand the world around us and help us to make adaptive responses. Thus, it is the use and synthesis of raw data yielding complex behavior and learning. Information gathered from all sensory channels is registered, processed and interpreted by the brain in order to make sense of the environment allowing an individual effective and successful interaction in the environment. Four basic patterns of responding to sensory events in everyday life are Sensory Seeking, Low registration, Sensation Avoiding and Sensory

Reviews from western studies showed that women had higher sensory sensitivity (Batya Engel-Yeger and Winnie Dunn, 2011), sensitivity to painful stimuli has generally been found to be lower in premenstrual phases of the cycle (Parlee, Mary B. 1983), changes in sensory processing that occur with aging, age related decline in sensory processing for locomotion and interception (Francois, M., Morice, A.H.P., Blouin, J. and Montagne, G. 2011), sensory processing in schizophrenia (Brown, C., Cromwell, R., Fillion, D., Dunn, W., and Tollefson, N. 2002), sensory processing in everyday lives (Pohl, P., Dunn, W., and Brown, T. 2001), measuring patterns of sensory processing (Brown, C., Cromwell, R., Fillion, D., Dunn, W., and Tollefson, N. 2001). The present study would endeavor to find the sensory processing of women in reproductive and post reproductive period. There is a need to study the aspect as very little work has been done in India especially in Jammu region and most of the review available was from West.

OBJECTIVES OF THE STUDY
The objectives taken for the present study were as following:

- To measure the sensory processing preferences of women in reproductive and post reproductive period in the areas of Taste/smell processing, Movement processing, Visual processing, Touch processing, Activity processing and Auditory processing and
- To compare the sensory profile of women in reproductive period (25-35) and post reproductive period (45-55).
- To plan intervention on the basis of interpretations of sensory profile

MATERIAL AND METHOD
The total sample for the study was 150 adult women among them 75 were in reproductive and 75 in post-reproductive stage. A random sampling technique was used in the selection of various areas. A list of various urban areas of Jammu was made. From these areas, four
areas were randomly selected. The criteria for sample description were reproductive women in the age group of 25 to 35 years, post reproductive women in the age group of 45 to 55 years and adult women belonging to urban areas of Jammu was only selected for the present study.

The Adolescent/Adult Sensory Profile was used for data collection. The Adolescent/Adult Sensory Profile is a standardized tool devised by Winnie Dunn and Catana E, Brown (2002) as a trait measure of sensory processing. The Adolescent/Adult Sensory Profile consists of a User’s Manual and a Self Questionnaire, with a Summary Score Sheet included in the Self Questionnaire. The Self Questionnaire contains 60 items that describe responses to everyday sensory experiences. An individual completes the form by indicating the frequency of a response (Almost Never, Seldom, Occasionally, Frequently, Almost Always) to various sensory experiences. The Summary Score Sheet provides a summary of the individual’s score on each of the quadrants. It contains a Quadrant Grid to help summarize an individual’s scores in each quadrant, a Quadrant Summary to plot quadrant raw score totals and determine a classification, and a Quadrant profile to plot the classifications onto a graphic display and create an individual profile. The sensory profile will measure the Taste/smell processing, Movement processing, Visual processing, Touch processing, Activity processing and Auditory processing of adult women in reproductive and post reproductive period. Intervention was planned on the basis of interpretation of the sensory profile.

Data obtained was subjected to both qualitative and quantitative procedure of analysis. The data obtained by use of tools was complied and tabulated. Percentages for various categories were calculated and appropriate statistical techniques like mean, standard deviation, t-test were applied to drive the result.

**RESULTS AND DISCUSSION**

The data obtained was subjected to detail item analysis revealed that the majority of the respondents come under the category of sensory sensitivity in reproductive and post-reproductive period of adult women. Sensory sensitivity refers to the extent to which individuals detect and respond to faint and numerous stimuli in the environment. That is, some individuals detect even subtle stimuli in their surroundings as well as process this information. For example they are especially sensitive to pain, loud noise, violent movies, caffeine and hunger as well as feel overwhelmed by the demands that other individuals impose. Following it, some of reproductive and post-reproductive adult women come under the category of sensation avoiding, which may be very rigid, ritualistic and rule-bound in an attempt to control and limit stimulation in the context of daily life and reduce the amount of unpredictable stimulation. Sensation avoiders may also actively attempt to terminate a sensation, for example by covering one’s ears, leaving a room or avoiding crowded places. Some of the adult women in reproductive and post-reproductive period fall in the category of sensation seeking and they seem to show that they were very active, continuously engaging and excitable. Some women fall in the low registration category of post-reproductive period whereas some of them in reproductive period. Women seem uninterested; self aborted and sometimes dull in affect. They don’t notice what is going on around them, and miss cues that might guide their behavior. Overall, not much difference was found on the analysis of items that relate to various sensory processing categories of reproductive
and post-reproductive women. As Batya Engel-Yegler and Winnie Dunn (2011) review suggests, adult women had higher sensory sensitivity.

**Table 1 here**

The data was further analyzed using mean and t-scores on various indicators of sensory profile (Table 1). In low registration (pair I), mean scores of respondents in post-reproductive period is higher that is 40.43 than reproductive period that is 35.11 and shows that their mean scores fall in the category that is more than most people and t score shows that there is highly significant difference (4.383**) on the scores of low registration of women in reproductive and post-reproductive period. Women who have low registration patterns seem uninterested, self absorbed and sometimes dull in affect. They do not notice what is going on around them, and miss cues that might guide their behaviors. In sensation seeking (pair II), mean scores of women in reproductive period is 45.04 which is higher than the post-reproductive women that is 42.01 and t score shows that there is significant difference (2.581*) in the scores of sensation seeking of reproductive and post-reproductive period. Women who have sensation seeking patterns are very active, continuously engaging and excitable. In pair III, (sensory sensitivity), mean scores of reproductive period of women is 36.16 which is lower than the women in post-reproductive period that is 41.65 and t scores shows highly significant difference (5.115**) in the scores of sensory sensitivity. When people have a sensory sensitivity pattern of sensory processing, they detect more input than others. Women who have sensory sensitivity patterns are distractible, hyperactive and can be complainers. They notice many more sensory events than others do, and comment about them with regularity. In pair IV, (sensation avoiding) mean scores of reproductive period of women is 39.06 which is lower than the post-reproductive women’s period that is 41.59 and this shows that sensory processing patterns is similar to most people and t scores shows that there is significant difference (1.968*) in the scores of sensation avoiding of reproductive and post-reproductive period of women. When people have a sensation avoiding pattern of sensory processing, they are bothered by input more than others. Women who have sensation avoiding patterns are ritual driven and uncooperative. They engage in behaviors to limit the sensory input they must deal with. In Amberg et al (2002) study, the results were similar as reproductive period mean scores are lower than post-reproductive period mean scores on the low registration domain.

**Intervention**

The approach to intervention presented here focuses on meeting the needs of the individual-given his/her sensory processing preferences-as opposed to trying to change his/her sensory processing patterns. Intervention strategies were provided for high scores as well as low scores on each quadrant, and they are specific to each sensory processing category. The list of intervention strategies for high scores were more extensive than the lists of low scores because, conceptually and in practice, there has been a greater emphasis on designing interventions for people only after they exhibited a particular attribute.

**Table 2 here**

Table 2 depicts frequency of respondents in reproductive period on classification of each quadrant. Majority of the sample, fall in similar to most people classification that is 57% in low
registration, 56% in sensation seeking, 79% in sensory sensitivity and 71% in sensation avoiding. This signifies that they don’t need any intervention in any of the sensory processing category. The table further reveals that by combining more than most people and much more than most people classification that is high scores in various quadrants. 40% have high scores in low registration, 29% high scores in sensation avoiding, 20% high scores in sensory sensitivity and only 4% in sensation seeking and this indicates that they need intervention in various sensory processing categories. Intervention is also given to those women who have low scores (less than most people and much less than most people) on various quadrants. Majority that is, 40% need intervention in sensation seeking, followed by 3% on low registration and 1% on sensory sensitivity. Similar results were revealed by Brown et al (2002) that higher scores on low registration and low scores on sensation seeking.

Table 3 here

Table 3 depicts frequency of respondents in post-reproductive period on classification of each quadrant. Majority of the sample, fall in similar to most people classification that is 35% in low registration, 55% in sensation seeking, 51% in sensory sensitivity and 47% in sensation avoiding. This signifies that they don’t need any intervention in any of the sensory processing category. The table further reveals that by combining more than most people and much more than most people classification that is high scores in various quadrants, 65% have high scores in low registration, 50% high scores in sensory sensitivity and only 51% in sensation seeking. This means that this sample needs intervention in various sensory processing categories. Intervention is also given to those women who low score (less than most people and much less than most people) on various quadrants and only 45% adult women need in sensation seeking.

CONCLUSION

Sensory processing is how we organize, interpret, perceive and use information from our sensory systems (input) to produce a coordinated response (output). It has been concluded that, majority of the adult women fall under sensation seeking quadrant in the category of taste/smell processing of respondents in both reproductive and post-reproductive period. Majority of the adult women in movement processing category fall under sensory sensitivity quadrant in both reproductive and post-reproductive period. Respondents in post-reproductive period had higher mean scores than respondents in reproductive period in low registration, sensory sensitivity and sensation avoiding indicators whereas mean scores in sensation seeking indicator is higher in reproductive period. The t- scores revealed highly significant difference in low registration and sensory sensitivity indicators whereas significant difference in sensation seeking and sensation avoiding indicators between reproductive and post-reproductive period. It was also found that there was positive impact of intervention on sensory profile of women.
# TABLES

## Table 1 Mean and t scores of various indicators of sensory profile

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Reproductive period n=75</th>
<th>Post-reproductive period n=75</th>
<th>t scores</th>
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<tbody>
<tr>
<td>Low registration</td>
<td>35.11 ±6.253</td>
<td>40.43 ±7.852</td>
<td>4.383**</td>
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<tr>
<td>Sensation seeking</td>
<td>45.04 ±8.502</td>
<td>42.01 ±6.644</td>
<td>2.581*</td>
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<tr>
<td>Sensory sensitivity</td>
<td>36.16 ±6.698</td>
<td>41.65 ±7.468</td>
<td>5.115**</td>
</tr>
<tr>
<td>Sensation avoiding</td>
<td>39.06 ±6.676</td>
<td>41.59 ±8.359</td>
<td>1.968*</td>
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</table>

df = 74 at 0.05 significant level

** indicates highly significant at 0.01 (p<0.01)
* indicates significant at 0.05 (p<0.05)

## Table 2 Frequency of respondents in reproductive period on classification of each quadrant

<table>
<thead>
<tr>
<th>Quadrants</th>
<th>Much less than most people</th>
<th>Less than most people</th>
<th>Similar to most people</th>
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<td>-</td>
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## Table 3 Frequency of respondents in post-reproductive period on classification of each quadrant

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