



Assessment of Short Term Memory and Perception among Homemakers and Office Going Ladies

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Authors' contributions

This work was carried out in collaboration among all authors. Author FFA Literature search, survey, data collection, analysis, manuscript writing. Authors GS and SP Study design, data verification, manuscript drafting All authors read and approved the final manuscript.

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ABSTRACT

Background: Short term memory is the capacity of holding but not manipulating a small amount of information in the mind which is readily available in an active state for a short period of time. It is essential to analyze the frequency of short term memory and perception in working women and homemakers.

Aim: To comparatively evaluate short term memory and perception changes in home makers and working women

Materials and Methods: Descriptive cross-sectional study was done alone in home makers and working women under the range 25- 57years above.to assess the frequency type duration of exposure to stress at home and work environment, stress symptoms and short-term memory changes.

Results: The results of the present study showed that respondents were homemakers and had high amounts of stress which led them to have low short term, memory and perception. Working women have better short term memory and perception and respondents in the age group of 46-56 years had better short memory and perception

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Conclusion: The study concluded an innovative finding that stress is more in home makers compared to working women and are prone to memory loss, which they are ignorant. A proper education and awareness of stress relaxation reduction methods can help them to improve their quality in life.

Keywords: Short term memory; perception; home makers; working women; innovative.

1. INTRODUCTION

Memory is the capacity of holding a small amount of information in an active state[1]. There are different types of memory such as short-term memory, long term memory, explicit memory, semantic memory. Memory is the facility of the brain that holds data and information which is encoded and retired of sensation. The input of the physical world by sensory receptor and connected to the world which is defined as memory circuits. Women have more work when compared to men[2]. Hence women have better short term memory and perception when compared to males. Home makers take care of household chores like cooking and cleaning, and take care of children for the full time. Working women on the other hand spend less time at home and spend more time at work.[3,4][5,6]. Cortisol causes mental changes and decreases short term memory and perception. Cortisol is secreted in the hypothalamus. Increase in the amount of cortisol is associated with working women and homemakers and affects their performance [7]. There are techniques to manage stress so that women can have better short term memory. Activities like playing mind games, reading books, exercising helps in controlling stress so that they have better short term memory[7–9] Short term memory has a significant increase in females compared to males .[6][10][10–12].

A research study was conducted to examine the stress among the working and homemaker women in relation to family type in a sample of 90 women from Dharwad district, Karnataka State out of which working women were 45 and homemakers were 45 and a stress scale developed by Singh (2002) was administrated to all the subjects and the major findings of the study revealed that women from nuclear family experience significantly more stress compared to joint family women. Also, that working women from nuclear family undergo significantly high stress than working women from the joint family. (13)[13–17].

Since there are variations among women, the aim of the present study planned to investigate

and evaluate the short term memory and perception changes between home makers and working women

2. MATERIALS AND METHODS

A cross sectional study was done in 107 normal healthy women under the range 25-57 above years to understand the frequency of exposure of stress in working women and homemakers and to assess short term memory and perception in normal women involving both working women and homemakers through online based survey forms "google forms". Self administered questionnaire of 24 questions was developed. Method of sampling collected is simple random sampling. The responses were collected, tabulated in the excel sheet and analyzed. Data entered in SPSS version 23 and results were present in Bar graphs, Pie Chart. Statistical analysis was done using frequency analysis and chi square test using SPSS version 23

3. RESULTS

In the present study of home makers 53.3% are homemakers and 46.7 % are working women (Fig. 1). 79.4% are married and 20.6% are not married. 65.4% are affected due to mental illness or neurological and 32.7% are not affected due to mental illness or neurological (Fig. 2)84.6% are stressed at home are homemakers (Fig. 3) and 11.5% are not stressed at home are working womens. 27.2% are stressed at work, are working women and 72.2% are not stressed at work are also working women. 72.9% said that house work affects their memory, 14% said that house work does not affect their memory, 13.1% said maybe house work affects their memory. 29% spent less than 5 hours on house work every day, 60.7% spent 5 hours on house work everyday and 10.3 % spent more than 5 hours on house work everyday. 63.6% said that work affects their memory and 21.5 said that that work does not affect their memory. 14.2% spent 8 hours on work, 1.9% spent 6 hours on work, 81.1% spent 10 hours on work, 0.9% spent 4 hours on work, 0.9% spent 5 hours on work and 0.9% spent 7 hours on work.

16.8% play mind games and 70.1% do not play any kind of mind games. 12.1% reads educational books, 55.1% reads magazines, 15% reads newspapers, 0.9% reads comics, 10.3% reads religious books and 6.5% reads other books. 7.5% spend 5 hours on television every day, 58.9% spend 4 hours on television everyday, 29% spend 2 hours on television everyday and 4.7% spend 3 hours on television every day. 30.8% takes 15 minutes for eating healthy food everyday, 65.4% takes 30 minutes for eating healthy food everyday 1.9% takes 45 minutes for eating healthy food everyday and 1.9% takes more than minutes for eating healthy food everyday. 8.4 said work is the main reason for stress, 11.2 said personal reason is the main cause for stress, 76.6% said both the work and personal reason is the main cause for stress and 3.7 said no reason for stress. 15.9% said financial problems were the main cause for stress if personal is the main reason, 62.6% said adjustments with friends were the main cause for stress if personal is the main reason and 21.5% said health problems were the main cause for stress if personal is the main reason. 6.5% said strict boss were the main cause for stress if work is the main reason, 18.7% said time management were the main cause for stress if work is the main reason, 10.3% said peer pressure were the main cause for stress if work is the main reason and 64.5% said other reason were the main cause for stress if work is the main reason 9.3% follows strict boss stress management, 3.7% follows meditation and 61.7% follows exercise. 2.8% are smoking to fight stress, 14% are drinking alcohol

to fight stress, 13.1% are using anti-depressant drugs to fight stress and 6.6% are using other products to fight stress. 6.5% are having muscle aches are related to stress, 12.1% are having loss of appetite are related to stress, 3.7% are having vomiting are related to stress, 52.3 are having acidity that are related to stress, 17.8% are having sadness are related to stress, 6.5% are having gastro oesophageal reflexes that are related to stress and 0.9 are having other symptoms are related to stress (Fig. 4). 25.2% are able to recall what happened yesterday, 7.5% are unable to recall what happened yesterday and 67.5% are able to recall sometimes and unable to recall sometimes what happened yesterday. 54.2% are able to collect their groceries in supermarkets in a short period, 9.3% are unable to collect their groceries in supermarkets in a short period and 36.4% are sometimes able and sometimes unable to collect their groceries in a supermarket in a short period.

3.1 Cross Tab Evaluation

The Association between age groups and level of stress at home were analysed. Majority of homemakers in the category of 46-56 years have maximum stress at work and the Pearson Chi square value = 0.000 ($p < 0.05$) statistically significant (Fig. 5) The Association between age groups and mental illness was analysed. Majority are home makers are in the category of 46-56 years have maximum stress at work and the Pearson Chi square value = 0.029 ($p < 0.05$) statistically significant (Fig. 6).

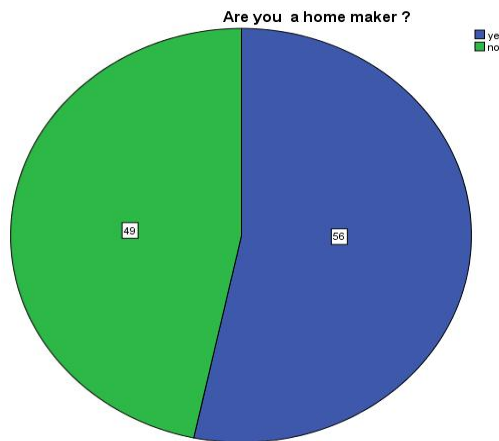


Fig. 1. Pie chart shows the responses to the question about are you a homemaker. blue represents yes and green colour represents no. Majority of the respondents responded as homemakers which is 53.3%

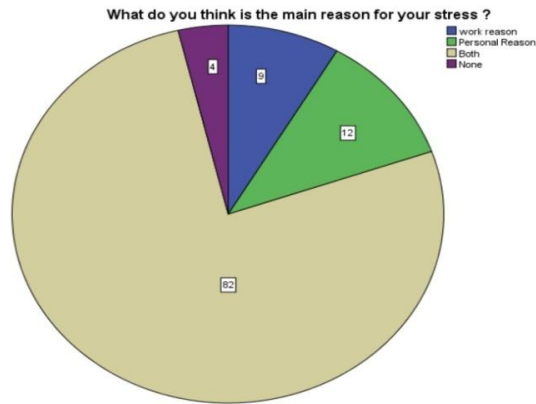


Fig. 2. Pie chart shows the responses to the question's main reason for stress. blue represents work reason and green colour represents personal reason and yellow represents both and purple represents none. A majority of the respondents responded both which is 82%

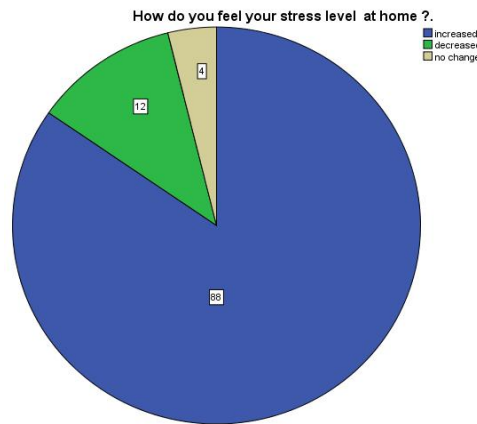


Fig. 3. Pie chart shows the responses to the question about the stress level at home. blue represents increased stress level, green represents decreased stress level and sandal represents no change. A majority of the respondents responded as homemakers which is 88%

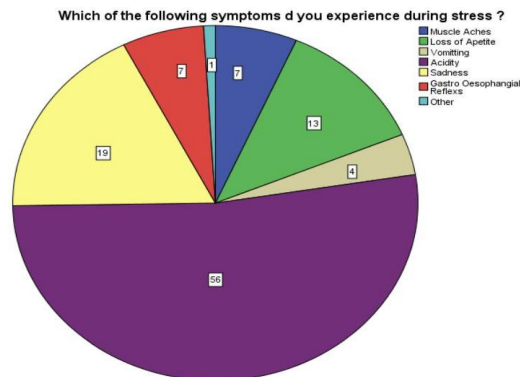


Fig. 4. Pie chart shows the responses to the question about the symptoms experienced during stress. blue represents muscle aches which is 7%, green represents loss of appetite which is 13%, sandal represents vomiting which is 4%, yellow represents sadness which is 19%, purple represents acidity which is 56%, red presents gastro oesophageal reflexes which is 7% , light blue represents other which is 1%

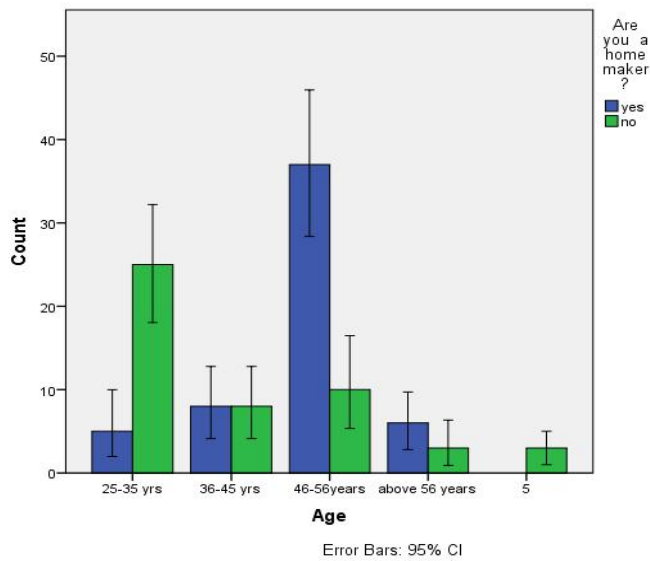


Fig. 5. Bar graph depicts the association between the age and number of responses . X axis represents different age groups and the y axis represents the number of responses. Blue represent yes and green represent no .Majority are home makers are in the category of 46-56 years were home makers (37 %) compared to other age groups and the value was found to be statistically significant as in Chi square test, the p value is 0.000 ($p < 0.05$)

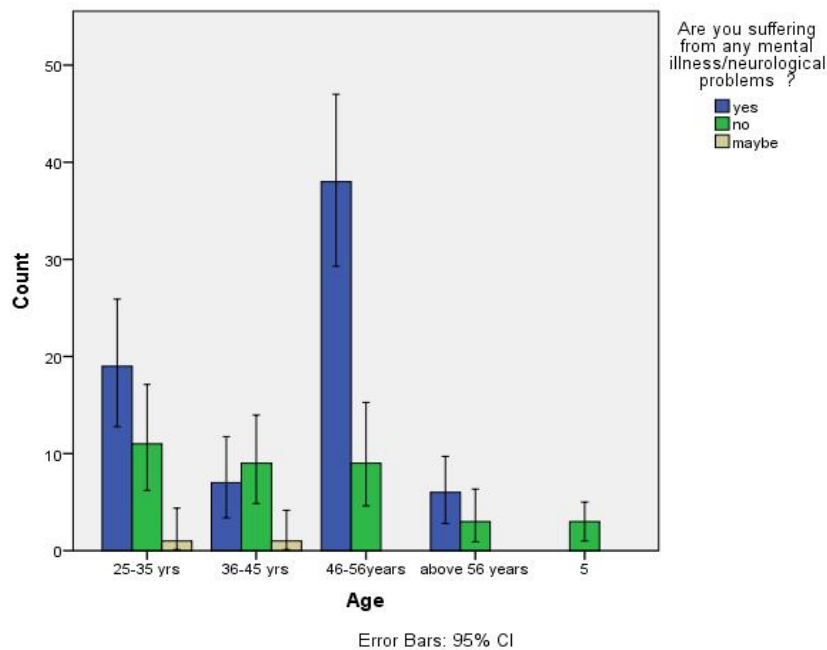


Fig. 6. Bar graph depicts comparison of responses between mental illness at work with age . x axis represents different age groups and the y axis represents the number of responses. Blue colour represents yes , green represents no , and yellow represents maybe .Majority of home makers in the category of 46-56 years responded yes (38%) to suffer from mental illness and neurological problem compared to other age groups and the value was found to be statistically significant as in Chi square test, p value is 0.029 ($p < 0.05$)

4. DISCUSSION

Memories after its formation are reported to undergo changes based on past experiences leaving fingerprints from having handled it again. Stress can inhibit the way we form and retrieve memories and can affect how our memory work. There are ample evidence to state that stress can affect memory, and these studies support our present findings. When stressed, people develop more difficulties in creating short-term memories and also the conversion of those short-term memories into long-term memories.[18–20][21–26],[27][28–32]. There are confounding reports by Shield that supported our study that stress could impede the formation of memories if it occurred prior to or during memory encoding. (Shields et al 2017) In our study Home makers responded to be more stressed and this may be attributed to their work stress, financial burden, family and relationship problems, children issues etc. Working women move out from the relationship and financial stress and put them in comfortable positions in society and that may be a reason for them being less stressed.

Stress can also lead to exhaustion, and this can lead to cognitive impairment that includes issues with attention and working memory. Unfortunately, memory impairment can still be detected three years later, even after the exhaustion has been addressed.

Interestingly, the Stress mechanism increases the levels of cortisol and this amount of cortisol was not directly related to the effects of stress on memory. This means that if you create more cortisol during your stress response, this won't necessarily mean that your memory will be more impaired than someone who is less hormonally-responsive. Interestingly, women who were on oral contraceptives experienced less of a negative effect.

Stress responses can also lead to exhaustion of body as well as mind, and this can ultimately lead to cognitive impairments like issues with attention and working memory. But, Unfortunately, these memory impairments can still be detected even three years later, even after the exhaustion had been addressed.

5. CONCLUSION

Thus the present study concluded that stress is more among homemakers compared to working women and they are prone to memory loss which

they are ignorant upon. A Proper education and awareness of stress relaxation reduction methods can help them improve their quality of life.

LIMITATIONS OF THE STUDY

There are no limitations in this study.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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