A Study of Mental Health among Elderly Females: With Reference to Age and Physical Activity Status

Suhail Yaqoob Bhat¹, Dr. Yuwraj. Shrivastava², Dr. Sharda Kashyap³

¹ Research Scholar, Department of Physical Education, Dr. C V Raman University
² Associate Professor, Department of Physical Education, Dr. C V Raman University
³ Senior Sports Officer, Govt. Bilasa Girls College, Bilaspur (C.G.)
Suhail2573@gmail.com

Abstract: The present study was carried out to find out the effect of age and physical activity status of elderly females. To conduct the study 250 physically active elderly women (Ave. age 64.11 yrs) and 250 elderly women with sedentary lifestyle (Ave. age 63.23 yrs.) were selected as sample. Mental health of selected subjects was assessed by PMHI prepared by Agashe and Helode (1998). Walking, light exercise, recreational activities and yoga on regular basis were considered as physical activity apart from day-to-day work. Analysis of data in the form 2x2 factorial design reveal significant main effect of physical activity status and age on mental health of elderly females. The main effect of physical activity status reveals that elderly females engaged in regular physical activity possess significantly more magnitude of mental health as compared to sedentary elderly females. The mental health of elderly females of 60-65 years age group was found to be significantly superior as compared to that of elderly females of 65-70 years age group. The two factor interaction effect age and physical activity status was not observed on mental health of elderly females. It was concluded that age and physical activity status alone and not in interaction with each other are significant contributors towards mental health in elderly females.

Keywords: Physical activity, mental health, age, elderly

Introduction
Mental health includes self acceptance, personal growth, purpose of life, environmental mastery, autonomy, and positive relations with other. Psychological well-being is a part of positive psychology and all the factors of psychological well-being also constitute mental health model. Mental health has been accepted as an enduring state of psychological well-being and/or state of sound mind in sound body that makes an individual useful for himself and effective for his fellow beings within the framework of a given socio-cultural environment of which he is a valuable member. Due to improved life expectancy the elderly population in India will be close to 19% as compared to 8.6% in 2011. It has been scientifically documented that geriatric population is more susceptible to mental health issues hence quite a few researchers paid attention to it. Researchers like Emery and Gatz (1990), Singh et al. (1997), Sims et al. (2006), Singh et al. (2010), Naushad et al. (2016), Singh et al. (2016), Goud and Nikhade (2015), Yadav and Agashe (2018) paid attention to mental health issues along with its prevalence and therapeutic measures. The noticeable factor came out of these studies is that researchers only studied negative aspect of mental health and positive mental health was somewhat neglected. Secondly impact of regular physical activity along with age on mental health of elderly females has not been studied. Hence the present study was planned.

Objectives
The objective of the present study is to assess main and interaction effect of physical activity status and age on mental health among elderly females.

Hypothesis
It was hypothesized that physical activity status (regular-sedentary) and age alone and in interaction with each other significantly influence mental health of elderly females.

Methodology:
The following methodological steps were taken in order to conduct the present study.

Sample:
To conduct the study 250 physically active elderly women (Ave. age 64.11 yrs) and 250 elderly women with sedentary lifestyle (Ave. age 63.23 yrs.) were selected as sample. Out of these 295 subjects were between 60-65 years of age while 205 subjects were between 65-70 years of age. Purposive sampling was used for selection of sample.

Tools:
Mental Health Inventory:
To assess mental health of elderly female subjects, Positive mental health inventory prepared by Agashe and Helode (1988) was used. This inventory is made up of 36 statements. This inventory is highly reliable and valid.
Procedure:

500 elderly female subjects between the age group of 60 and 70 years were selected purposively. 250 elderly females engaged in regular walking, cycling, light exercise for minimum of 35 min. duration were considered as physically active subjects while the group of 250 elderly females were living a sedentary life. After regular consideration of ethics, positive mental health inventory prepared by Agashe and Helode (1988) was administered to each subject. Response on each statement was evaluated as per instructions provided in manual of the inventory. 2x2 ANOVA design was preferred for data analysis with physical activity status (regular-sedentary) and age (60-65 years and 65-70 years) acted as independent variable measures while mental health acted as dependent variable.

Result & Discussion

Table 1 reveals the following facts–

The main effect of physical activity status on mental health of elderly females was found to be statistically significant at .01 level (F=445.59, p<.01). It reveals that mental health of elderly females engaged in regular physical activity was significantly higher (M=29.49) as compared to mental health of sedentary elderly females (M=18.10).

F=9.74, an indicator of the main effect of age on mental health of elderly females was found to be statistically significant at .01 level. It reveals that mental health of elderly females between 60-65 years age group was significantly better (M=24.64) as compared to sedentary elderly females (M=22.95).

The F of .002, an indicator of interaction effect of physical activity status and age on mental health of elderly females was not found to be statistically significant.

The results are consistent with previous findings in which affect of regular physical activity / exercise was found to be beneficial for eliminating the mental health issues. The impact of age on mental health was not surprising because of loneliness, financial constraints associated with it. As far as interaction effect is concerned, the results were in expected direction because of two significant main effect of two independent variables.

<table>
<thead>
<tr>
<th>Table 1. Effect of Physical Activity (A) x Age (B) on Mental Health among Elderly Females (N=500)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (B)</strong></td>
</tr>
<tr>
<td>Physical Activity Status (A)</td>
</tr>
<tr>
<td>Sedentary (a₂)</td>
</tr>
<tr>
<td>Marginal Mean</td>
</tr>
</tbody>
</table>

**ANOVA Summary**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>15230.146</td>
<td>1</td>
<td>15230.146</td>
<td>445.59**</td>
</tr>
<tr>
<td>B</td>
<td>333.094</td>
<td>1</td>
<td>333.094</td>
<td>9.74**</td>
</tr>
<tr>
<td>AB</td>
<td>0.063</td>
<td>1</td>
<td>0.063</td>
<td>.002 (NS)</td>
</tr>
<tr>
<td>Within treatment (Error)</td>
<td>16953.021</td>
<td>496</td>
<td>34.179</td>
<td></td>
</tr>
</tbody>
</table>

** Significant at .01 level; NS - Not Significant
**Conclusion**

On the basis of results following conclusions are drawn:
1. Elderly female with regular physical activity possess more magnitude of mental health as compared to elderly females with sedentary lifestyle.
2. Mental health of elderly females gets affected by advancing age.
3. Physical activity status and age together did not emerge as influencing factor towards mental health among elderly females.

**References**


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