Effectiveness of craft work, art therapy and play therapy on stress and cognitive function among senior citizens in a selected old age home

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Abstract
Emotional Stress is a more subtle, if it’s chronic, the eventual consequences can be as harmful. Stress hormones (Cortisol and adrenaline) provide energy and focus in the short term, but too much stress over too many years can throw a person system off balance. Overloads of Stress hormone have been linked to many health problems, including heart disease, high blood pressure and weaken immune functions. For older people already at heightened risk for these illnesses, managing stress is particularly important. Wools ton. C., (2006).

Keywords: Art therapy, play therapy, cognitive function

Introduction
According to Ageing and health program (2005), there are currently 580 million people in the world who are aged 60 years and above. This is expected to rise to 1000 million by 2020 with over 700 million in the developing world. Older people over 60% of them live in developing countries.

Current data from the Bureau of Statistics show that the general population of the USA is 281,421,906 (personal communication, US Bureau of Statistics). Of these, 34,991,753 are 65 years old and older. Moreover, 4,239,587 women and men are 85 years old and older, representing 1.5% of the total general population of the USA. An interesting note is that the current population of US elders who are at least 85 years old has 1,140,587 more members than the total of this cohort in the year 1900. Mary Moore Free, (2002)

Factors causing stress in old age that may include environmental stressors, physiological stressors, social stressors, changes of any kind can induce stress like insecurity, rejection, need for approval and inability to cope with changed circumstances. Interpersonal issues that can induce stress in family, club, organization issues that can induce stress. Sreevani. R., (2007)

Review of Literature
Section A: Studies related to stress among senior citizens
Lefrancois, R. et al., (2000) conducted study on, Stressful life events and psychological distress of the very old in Canada. The purpose of the study was to examine whether social support has a moderating effect on the relationship between exposure to stressful life events and psychological distress. To test this, 224 men and women aged 81-86 were sampled from two municipal regional countries. The French version of the Geriatric Scale of Recent Life Events, the Psychiatric Symptom Index, and the social provision scale were used. The results show that the negative aspect of social interaction may explain why social support did not have a protective effect. Also, social isolation resulting from psychological distress could reduce the opportunity for instrumental help and emotional support.

Louise H. Phillips, et al., (2002) conducted a study on Age and the Understanding of Emotions. Mayer and colleagues have developed a battery of emotional intelligence tasks (the Multidimensional Emotional Intelligence Scales [MEIS]) that predict key criteria such as life satisfaction and empathy for others along with people’s ability to regulate their mood. In the study 30 young (aged 20-40years, $M_{29.9 years}, SD_{7.1}$), and thirty old (aged 60-80 years,$M_{69.2 years}, SD_{6.1}$).The younger group comprised 11 men and 19 women, the older group 15 men and 15 women. The age groups differed in terms of years of education, $t (58) =2.98, p_{-.01}$(young$M_{14.45} years, SD_{2.79}$, old$M_{12.20} years, SD_{3.11}$).Performance of the young and old age groups on the tasks are reported.
There was no effect of age group on the two emotional. There was no significant age effect on identifying emotions in the faces, the older group performed significantly worse than the young group. There were no age effects on surprise, disgust, or fear. However, older people were significantly more likely to make errors on anger, and sadness, \( p < .05 \). Kiecolt-Glaser, McGuire. et al., (2002) conducted a study on the experience of stress can result in significant negative health consequences in both young adults and older adults in US. Stress-related distress was measured using Cohen and colleagues Perceived Stress Scale. Stress-related cognitive interference was measured using the Impact of Event Scale. he correlation between the scales was \( r(109) = .61, p < .01 \). The reliability for the total score was 0.91. The results of this model suggest that it is not the degree to which individuals perceive their lives to be stressful but the extent to which they report experiencing intrusive thoughts or ruminate about a stressful life experience that is associated with cognitive performance deficits.

**Statement of Problem**

Effectiveness of craft work, art therapy and play therapy on stress and cognitive function among senior citizens in a selected old age home.

**Objectives of Study**

1. To assess the pretest level of stress and cognitive function among senior citizens.
2. To assess the post test level of stress and cognitive function among senior citizens.
3. To compare the pretest and post test level of stress scores among senior citizens.
4. To compare the pretest and post test level of cognitive function scores among senior citizens.
5. To find the association between post test level of stress scores among senior citizens with their selected demographic variables.
6. To find the association between post test level of cognitive function scores among senior citizens with their selected demographic variables.

**Operational Definition**

**Effectiveness**

It means producing favourable result from an action or cause. Lifco dictionary.

In this study, effectiveness refers to determine the extent to which the selected recreational therapy has brought intended results that is measured in terms of significant difference in pre-test and post test scores among senior citizens by using statistical measurements.

**Recreational therapy**

Recreational therapy is the technique provided to patients with the opportunity for fun and feeling good. It constitutes a pleasurable way of passing time and is also the medium through which a wide range of skills can be learned. Lalitha. K., (2007) In this study, selected recreational therapy which includes craft work, art therapy and play therapy which was given to senior citizens daily once for 20 days.

**Craft work**

It is an activity involving skill in making things by hand. Oxford dictionary In this study, it refers to demonstrate and guide the senior citizens to make the craft work which includes making greeting cards, bouquets, and wall hangings for 30-40 minutes in morning hours.

**Art therapy**

It is the method of presenting their thoughts into picturized form to relief their stress. Sreevani. R., (2007) In this study, it refers to encourage the senior citizens to involve in the activities of painting with colors, papers and designed materials for 30-40 minutes in morning hours.

**Play therapy**

It is the method to express their experiences and feelings through a natural, self-guided, self-healing process. Lalitha. K., (2007) In this study, Play therapy refers to encourage the senior citizens and to participate in the of indoor games like Puzzles, ludo, snake and ladder, brain vita for 30 minutes to one hour in evening hours.

**Stress**

Stress is defined as a real or interpreted threat to physiological or psychological and/or behavioural response. It is bodily or mental tension resulting from factors that tend to alter an existing equilibrium. Lalitha. K., (2007) In this study, it refers to the level of stress is assessed on three aspects which includes senior citizen’s physiological, psychological and cognitive symptoms which is measured by stress assessment scale and its scores. Cognitive function is the act, process or result of knowing, learning or understanding.

An intellectual process, by which one becomes aware of, perceives or comprehends ideas. It involves all aspects of perception, thinking, reasoning and remembering. Nambi. S., (2007) In this study, it refers to the intellectual process which includes orientation, registration, attention, calculation, recall and language which is measured by Mini Mental Status Examination which assess the level of cognitive impairment and its scores.

**Senior citizens**

Most developed world countries have accepted the chronological age of 65 years as a definition of ‘elderly’ or older person. WHO, (2001) In this study, senior citizens refer to older adults who are above 65 years of age residing in old age home.

**Assumptions**

- The senior citizens may have impairment in cognitive function due to ageing process.
- Institutionalized senior citizen may have increased level of stress due to isolation from the family.
- Practicing recreational therapy may reduce stress and improve cognitive function among senior citizens.

**Hypothesis**

\( H_1 \): The mean post-test stress score is significantly lower than the mean pre-test stress score among senior citizens.

\( H_2 \): The mean post-test cognitive function score is significantly higher than the mean pre-test cognitive score among senior citizens.

\( H_3 \): There will be a significant association between the post-test stress score of senior citizens with their selected demographic variable.

\( H_4 \): There will be a significant association between the
post-test cognitive score of senior citizens with their selected demographic variables.

Delimitations
- Data collection period is limited to 5 weeks only.
- The sample size for the present study is 60.

Materials and Methods
Source of Data
The data will be collected for a period of 5 weeks in of the poor home for the aged among 60 old age people. The researcher will get written permission from head of the institution and oral consent from the participants. The samples will be selected by convenience sampling technique.

Research Design
The research design selected for this study is pre experimental design (i.e.) one group pre-test and post-test design

Variable
Dependent: Senior citizens residing in old age home
Independent: Structured recreational therapy

E=O₁ X O₂
C=O₁² O₁₂

Keys
E- Experimental Group.
C- Control group.
O₁- Pre-test knowledge.
X- Intervention.
O₂- Post-test knowledge

Setting of the Study
Study will be undertaken in selected old age home, Bangalore.

Population
The population of the study will be senior citizens.

Sample Size
The sample size will be 60 senior citizens.

Criteria for Sample Selection
Inclusion Criteria
- Senior citizens who are aged above 65 years.
- Both male and female.
- Senior citizens who are willing to participate.

Exclusion Criteria
- Senior citizens who are having hearing loss, visual impairment.
- Senior citizens who are chronically ill and bed ridden.

Sampling Technique
Convenience sampling technique will be used to select the sample.

Instruments Used
a. Stress assessment scale adopted from Kenyon's (2005) consisting of three components such as physiological, psychological and cognitive symptoms of stress
b. Mini mental status examination which includes orientation, registration, attention and calculation, recall and language

data Analysis
Data analysis will be done by using descriptive and inferential statistics.

Descriptive Statistics
Frequency %, mean standard deviation will be used to describe the demographic variables of senior citizens and assess the level of stress and cognitive function.

Tools for Data Collection
The tool consist of 3 parts
PART-I: It consists of demographic variable like age, sex, education, previous occupation, religion, marital status, number of children and support system.
PART-II: Stress assessment scale adopted from Kenyon's (2005) to develop the stress assessment rating scale which consists of 40 items. Every question was rated as very often, often, sometimes, rarely and never. It consists of three components such as physiological, psychological and cognitive symptoms of stress.
PART-III: The Hartford Institute for Geriatric Nursing (1975) Mini mental status examination consists of 30 items which includes orientation, registration, attention and calculation, recall and language.

Methods of data Collection
The first 5 days will used for pre-test. For each person about 5 minutes will be used to collect demographic variables. The stress assessment rating scale will be used to assess the level of stress for 15 minutes and Mini Mental Status Examination will be performed to assess the level of cognitive function for 15 minutes before giving selected recreational therapy. The data will be collected from 12-13 members per day. After pre-test selected recreational therapy will be given in the form of craft, art therapy and play therapy for 20 days. The post test will be conducted on the 21st day. The collected data will be analysed and tabulated.

Inferential Statistics
Paired “t” test will be used to assess the effectiveness of selected recreational therapy on stress among senior citizens and to assess the effectiveness of selected recreational therapy on cognitive function among senior citizens.
Chi-square test will be used to find the association between the post-test level of stress scores among senior citizens with their selected demographic variables and to find the association between the post-test level of cognitive function scores among senior citizens with their selected demographic variables.

Conclusion
Structured recreational therapy will be provided for patients in selected old age home in Bangalore.

References