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Research Paper

The Effectiveness of Geriatric Physiotherapy (GPT) Intervention on the Depression of Institutionalized Elderly

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ABSTRACT

Depression, otherwise known as major depressive disorder or clinical depression is a common and serious mood disorder. WHO defines depression as 'Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness and poor concentration'. Depression is seen both in elderly and in every age group in equal extent.

World Health Day 2017 has been focused on depression. According to World Health Organization, in all countries the second highest cause of disability after heart disease will be major depression in 2020, and it is estimated that 322 million people are in depression and half of them are in South East Asia and Western Pacific region including 56 million Indians. Depression among elderly is transcendent directly because of conflicts within the family. Many studies state that depression prevalence is higher in institutionalized older people than community dwelling elderly people. Elderly people's personal autonomy, independence, self-determination and privacy are highly compromised at home, which in turn affects psychosocial status and brings about dissatisfaction both physically and mentally. According to WHO (2006), all the people, around the world and in all cultures, are affected by depression. About 85% are not properly diagnosed and so diagnosing depression in elderly is a challenging task. As other diseases, depression also can be treated if it is diagnosed in proper time. So, the early identification plays a vital role in treatment of the disease. Screening helps in identifying depression, and the most common screening for elderly includes General Health Questionnaire (GHQ), Beck Depression Inventory (BDI), and Geriatric Depression Scale (GDS).

This study observes the significance of Geriatric Physiotherapy (GPT) in general mental health as resulting variable of depression among institutionalized elderly people. Geriatric Physiotherapy (GPT) is an intervention considered to enhance the physical and general mental health of elderly people.

Keywords: *Geriatric Physiotherapy (GPT), Depression, General Mental Health, Elderly*

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Objectives

The following are the objectives of the study:

- To examine the effectiveness of Geriatric Physiotherapy (GPT) on depression among male and female elderly population.
- To explore the effectiveness of Geriatric Physiotherapy (GPT) on general mental health as a resulting variable of depression among male and female institutionalized elderly population.

Hypotheses

The study was conducted with the following hypotheses:

- Geriatric Physiotherapy (GPT) will influence the depression among institutionalized elderly population.
- Geriatric Physiotherapy (GPT) will influence mental health as resulting variable of depression among institutionalized elderly population.

METHODOLOGY

In this study, descriptive survey method was used by the researcher for an effective data collection.

Instruments Used

The following instruments were used in this study:

1. **Geriatric Depression Scale – 15:** GDS-15 was utilized to measure depression in the present study for the older population. This scale was developed by Sheik and Yesavage (1986), which consists of 15 items and designed to answer 'Yes' or 'No' answer format. This questionnaire can be used for healthy, medically ill and mild to moderately cognitively impaired older adults. Reliability and validity of the tool have been supported through both research and clinical practice. A validation study comparing long and short forms of the GDS for self-rating of symptoms of depression was successful with a high correlation ($r = 0.84$, $p < .001$) (Sheikh & Yesavage, 1986) in differentiating depressed from non-depressed adults. Score of 0-4 is normal, 5-8 indicate mild depression, 9-11 indicate moderate depression, and 12-15 indicate severe depression.
2. **GPT (Geriatric Physiotherapy) Intervention:** Geriatric Physiotherapy (GPT) is an intervention designed to augment physical and mental health of the elderly population. It comprises of four sets of exercises viz., sitting exercises, flexibility exercises, strengthening, and balance exercises. This intervention was conducted for 50 elderly people (25 male and 25 female) for a duration of 21 days. After 21 days of intervention, post-test was taken to find out the effectiveness of Geriatric Physiotherapy (GPT) on mental health and depression.

Sample

The present study comprised of 50 samples (25 elderly male and 25 elderly female) selected from old age institutions in Mangalore, Karnataka. Samples were chosen for Geriatric Physiotherapy intervention as per the inclusion and exclusion criteria. Appropriate permission from the concerned authorities was taken before contacting the elderly persons and informed consent was obtained. Level of depression was measured both before and after the GPT intervention.

Data Collection

After obtaining informed consent, confidentiality was assured, and Geriatric Depression Scale – 15 questionnaire was administered. The items were clearly explained and doubts were cleared, if any. The respondents were allowed to take required time to respond to all the items of the instrument.

Statistical Techniques

Statistical Packages for Social Sciences (SPSS) version 22.0 was used for the statistical analysis. t-test statistics was worked out to analyse the effect of Geriatric Physiotherapy intervention on geriatric depression of institutionalized men and women.

RESULTS AND DISCUSSION

H_a1There will be significant reduction in Depression of Institutionalized Elderly Men after the Geriatric Physiotherapy (GPT) Intervention.

To find out the effect of GPT intervention on geriatric depression of institutionalized elderly men, *t*-test was worked out and the above-stated hypothesis was tested.

Table 4.1, Mean Difference between the Institutionalized Elderly Men's Depression before and after the GPT intervention.

Variable	Phase	Mean	*N*	Std. Deviation	*t*-value	*df*	*Sig.*
Geriatric Depression	Before Intervention	9.08	25	2.03	7.33	24	.000
	After Intervention	7.12	25	1.61			

(t = 7.33, df = 24, p< 0.05, two tailed)

The above table shows that the *t*-value is 7.33 with *df* = 24, which is significant at .000 level. Therefore it can be concluded that depression of institutionalized elderly men was lower after the Geriatric Physiotherapy (GPT) intervention (M = 7.12) than before GPT intervention (M = 9.08) and the alternate hypothesis, which states that there would be significant reduction in the depression of institutionalized elderly men after the Geriatric Physiotherapy (GPT) intervention is retained.

H_a2, There will be significant reduction in Depression of Institutionalized Elderly Women after the Geriatric Physiotherapy (GPT) Intervention.

To find out the effect of GPT intervention on geriatric depression of institutionalized elderly women, *t*-test was worked out and the above-stated hypothesis was tested.

Table 4.2, Mean Difference between the Institutionalized Elderly Women's Depression before and after the GPT intervention.

Variable	Phase	Mean	*N*	Std. Deviation	*t*-value	*df*	*Sig.*
Geriatric Depression	Before Intervention	5.88	25	3.27	5.95	24	.000
	After Intervention	3.92	25	2.25			

(t = 5.95, df = 24, p< 0.05, two tailed)

The above table shows that the *t*-value is 5.95 with *df* = 24, which is significant at .000 level. Therefore it can be concluded that depression of institutionalized elderly women was lower after the Geriatric Physiotherapy (GPT) intervention (*M* = 3.92) than before GPT intervention (*M* = 5.88) and the alternate hypothesis, which states that there would be significant reduction in the depression of institutionalized elderly women after the Geriatric Physiotherapy (GPT) intervention is retained.

H_a3, There will be significant improvement in General Mental Health of Institutionalized Elderly Men after the Geriatric Physiotherapy (GPT) Intervention.

In order to test the above stated hypothesis *t*-test was run and the results are presented in table 4.3.

Table 4.3, Mean Difference between the Institutionalized Elderly Men's General Mental Health before and after the GPT intervention.

Variable	Phase	Mean	*N*	Std. Deviation	*t*-value	*df*	*Sig.*
General Mental Health	Before Intervention	20.92	25	2.72	7.39	24	.000
	After Intervention	23.2	25	2.12			

(*t* = 7.39, *df* = 24, *p*< 0.05, two tailed)

It was found that the *t*-value of 7.39 with *df* = 24 is significant at .000 level. Therefore it can be concluded that General mental health of elderly men was higher after the Geriatric Physiotherapy (GPT) intervention (*M* = 23.2) than before Geriatric Physiotherapy (GPT) intervention (*M* = 20.92) and the alternate hypothesis, which states that there would be significant improvement in the general mental health of the institutionalized elderly men after the Geriatric Physiotherapy (GPT) intervention is retained.

H_a4, There will be significant improvement in General Mental Health of Institutionalized Elderly Women after the Geriatric Physiotherapy (GPT) Intervention.

In order to test the above stated hypothesis *t*-test was run and the results are presented in table 4.4.

Table 4.4, Mean Difference between the Institutionalized Elderly Women's General Mental Health before and after the GPT intervention.

Variable	Phase	Mean	*N*	Std. Deviation	*t*-value	*df*	*Sig.*
General Mental Health	Before Intervention	22.92	25	3.13	5.22	24	.000
	After Intervention	24.40	25	2.48			

(*t* = 5.22, *df* = 24, *p*< 0.05, two tailed)

It was found that the *t*-value of 5.22 with *df* = 24 is significant at .000 level. Therefore it can be concluded that general mental health of elderly women was better after the Geriatric Physiotherapy (GPT) intervention (*M* = 24.40) than before Geriatric Physiotherapy (GPT) intervention (*M* = 22.92) and the alternate hypothesis, which states that there would be significant improvement in the general mental health of the institutionalized elderly women after the Geriatric Physiotherapy (GPT) intervention is retained.

CONCLUSION

This study was conducted to find the effect of Geriatric Physiotherapy (GPT) on depression and general mental health. The findings of the study show that there was significant improvement in general mental health and significant reduction of depression of the institutionalized elderly people after Geriatric Physiotherapy (GPT) intervention. Hence, from the analysis of results, it can be concluded that Geriatric Physiotherapy (GPT) has a significant effect on the depression as well as general mental health of institutionalized elderly people.

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Conflict of Interest

The authors carefully declare this paper to bear not a conflict of interests

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