Introduction

The proportion of the world’s population aged 60 years or over increased from 8 percent in 1950 to 12 percent in 2013. It will increase more rapidly in the next four decades to reach 21 percent in 2050 [1]. India has around 104 million older adults (8.6% of the country’s total population) and the number is expected to increase to 296.6 million, constituting 20 percent of the total population by 2050 [1].

It has been estimated that of persons over 65 years, approximately 4 million have suffered moderate to severe mental health problems associated with aging process. Moreover, the most common mental disorder of old age is depressive disorder [2,3]. Therefore, the purposes of this study were to assess and compare the level of depression between the older adults residing at old age home and those living with the family; and to examine the association of depression with selected demographic variables.

Background

Traditionally, the family has been the primary source of care and material support for older adults throughout Asia, and the Indian family system is often held at high esteem for qualities like support, strength, duty, love, and care of the older people. With emerging changes in the social and cultural values, the older people who are economically unproductive are sadly neglected and at times they are forced to shift from their own place to some institutions/old age homes [4]. It is recognized that the older adults are prone to depression due to social isolation and poor socioeconomic status [5-7].

Previous studies conducted in different countries have reported that the level of depression among the older people living in the community ranged from 30.3% to 45.9% [5,7,8]. The depression rate among older people living in the institution/old age home ranged from 33.7% to...
72.8% [4, 9-11]. Three researchers compared the level of depression among older people living in the community and older people living in the institution. Two studies found that institutionalized older people were more depressed than older people living in the community [12, 13] but one study found no difference in the level of depression [14]. Studies have also reported that women were found to be more depressed than men [6-11, 15] and older people living alone were more depressed than living with a spouse or family [6, 8, 15].

In summary, depression was found among elderly people living in different countries including India. Overall, depression was higher among women and elderly living in an old age home compared to elderly living with the family.

Conceptual Framework

The conceptual framework in this study is based on Lazarus and Folkman’s transactional model of stress/adaptation [16]. A variety of elements influence how an individual perceives and responds to a stressful event. These predisposing factors strongly influence whether the response is adaptive or maladaptive. Types of predisposing factors include genetic influences, past experiences, and existing conditions [17]. For the present study, older adult is conceptualized as an adaptive system coming from internal environment (age and sex) and external environment (religion, marital status, educational background, type of family, income and children). Adaptive response would indicate no depression and maladaptive response would indicate depression in elderly which will be measured by Geriatric Depression Scale and categorized as normal, mild and severe.

Research questions

1. What is the level of depression among the older adults residing at old age home and older adults residing with the family?
2. Is there any difference in level of depression between the older adults residing at old age home and with the family?
3. Are there any association between level of depression and selected demographic factors of older adults residing at old age home?
4. Are there any association between level of depression and selected demographic factors of older adults residing with their families?

Method

A comparative study was done to assess the level of depression among older adults residing at an old age home and those living with the family. Association between depression and demographic variables were also explored. The sample size for this study was 200 older adults who were above 60 years of age (100 older adults residing at old age home and 100 older adults living with the family) in urban community of Kolkata, India.

Data was collected from two settings (one old age home and one community/ward) after obtaining approval from the Institutional Review Board (IRB) of the university and appropriate agencies such as Department of Health and Family Welfare and Secretary of Old Age Home and Councilor of Ward from where elderly were selected. A written consent was obtained from respondents prior to data collection. Participants were explained about the purpose of the study and about anonymity and confidentiality. After receiving the written consent, the researcher collected data.

Two questionnaires were used to collect data. Demographic questionnaire was used to collect demographic information such as age, gender, religion, marital status, education, income, family type, number of children, and residing with family or an old age home. The second questionnaire, Geriatric Depression Scale (GDS), a standardized tool [18], was used to assess level of depression. The GDS scale is comprised of 30 items (10 positive and 20 negative statements). Each item has two choices “Yes” or “No”. The depression score was categorized into normal (score 0 to 9), mild depression (score 10 to 19), and severe depression (score 20 to 30).

The questionnaire were translated from English to Bengali and then back to English. Language experts were involved in respective translation. To determine the clarity, ambiguity and feasibility of the tools, questionnaires were given to 10 elderly residing at one of the Old Age Homes and 10 elderly living in the community with family. No difficulty was found in administration of tool and clarity of items. The Cronbach’s Alpha reliability of Geriatric Depression Scale was 0.81.

Data analysis

Data was organized, tabulated and interpreted using descriptive and inferential statistics. Independent t-test was used to compare the level of depression between older adults residing at old age home and older adults living with the family. Correlation-coefficient and chi-square tests of association examined the relationship and associations between selected variables.

Results

Description of sample characteristics

Most of participants were between the ages 60 to 70 years (44.5%) and 71 to 80 years old (45%). The remaining of them (13%) were above 80 years old. Sixty five percent of them were male and majority of them were Hindus (85%). The majority of them (71.5%) were married and the remaining were unmarried (28.5%). The majority of the participants had primary education (38%) followed by secondary education (29%), graduate (17%), no education (15%) and post graduate (1%). Sixty seven percent of them were from nuclear families and 33% were from joint family. Majority of them had children (68.5%).

Level of depression among the elderly

The depression score of the participants living in an old age home ranged from 8 to 27 with the mean score 19.8 (SD=4.66). The depression score of participants residing with the family ranged from 7 to 26 with the mean score 14.05 (SD=4.68). The majority of the respondents residing at old age home experienced severe depression (64%), 30% experienced mild depression and rest 6% no depression. The majority (64%) of the respondents living with their families experienced mild depression whereas only 16% experience severe depression and 20% no depression.

Comparison of level of depression

An independent t-test was used to compare the level of depression between two groups. There was a significant difference in depression between participants residing in an old age home and participants residing with the family (t=8.71, df=198, p<.001), indicating
depression was more among participants residing at the old age home compared to participants residing with the family.

**Association between level of depression and selected demographic variables**

Age was positively correlated with depression of older adults residing in an old age home \( (t=4.12, r=0.38, p<0.001) \) and older adults residing with the family \( (t=3.51, r=0.32, p<0.001) \), indicating depression increases with age.

Findings (Table 1) suggest that depression among the older adults residing in an old age home was significantly associated with being unmarried, less educated, having no income, living in joint vs. Nuclear families and having no children. However, there was no association between depression and gender.

Findings were similar in the older adults living with families (Table 2). Depression was significantly associated with: marital status, level of education, income and having no children. However, gender and types of family (nuclear vs. joint) were not associated with depression.

**Discussion**

The findings of the present study revealed that level of depression was higher among the older adults residing in an old age home than the older adults living with family. The majority of the respondents living at old age home experienced severe depression while the majority of the respondents who were living with the family experienced mild depression. The findings are consistent with the previous studies that found higher level of depression among institutionalized older people than those of older people living with the family [12,14,19,20].

The findings of the present study showed that older adults residing in an old age home had four times more severe depression than older adults living with the families. This finding was supported by previous study findings, which found 30%-48% of nursing home residents suffer from depression, which was three to four times higher than in older people living in the community [19].

The present study found statistically significant association between level of depression of the older adults residing at old age home and selected demographic variables like age, marital status, education, income, type of family and children. Similar findings were reported by [9] who found a statistically significant association between depression level and the variables like age, sex, type of family and ethnicity. Significant associations were also found between the level of depression of the older adults residing with the family and selected demographic variables, such as marital status, education, income and children. A significant association was found between depression level and variables like poor socio-economic status, marital status, non-working or dependency and illiteracy [5]. Similarly, another study revealed that geriatric depression was significantly associated with women, separated/ divorced marital status, living alone, past history of stroke and cognitive impairment [6].

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**Table 1:** Chi Square test of association between level of depression of older adults residing at old age home and selected demographic variables.

| Selected variables | Level of depression | Total | \( \chi^2 \) |
|--------------------|---------------------|-------|------------|
|                    | At and below median | Above median |       |
| Marital Status     |                     |       |           |
| Married            | 52                  | 20    | 72        |
| Unmarried          | 7                   | 21    | 28        |
| Total              | 59                  | 41    | 100       |
| Education          |                     |       |           |
| <=Secondary        | 12                  | 27    | 39        |
| >=Secondary        | 47                  | 14    | 61        |
| Total              | 59                  | 41    | 100       |
| Income             |                     |       |           |
| Yes                | 25                  | 3     | 28        |
| No                 | 34                  | 38    | 72        |
| Total              | 59                  | 41    | 100       |
| Types of family    |                     |       |           |
| Joint              | 21                  | 6     | 27        |
| Nuclear            | 38                  | 35    | 73        |
| Total              | 59                  | 41    | 100       |
| Children           |                     |       |           |
| Yes                | 51                  | 19    | 70        |
| No                 | 8                   | 22    | 30        |
| Total              | 59                  | 41    | 100       |

\( \chi^2 (1)(n=100)= 10.83, p<0.001, \chi^2 (1)(n=100)= 3.84, p<0.05. \)

**Table 2:** Chi Square test of association between level of depression of older adults living with the family and selected demographic variables.

| Selected variables | Level of depression | Total | \( \chi^2 \) |
|--------------------|---------------------|-------|------------|
|                    | At and below median | Above median |       |
| Marital status     |                     |       |           |
| Married            | 45                  | 26    | 71        |
| Unmarried          | 10                  | 19    | 29        |
| Total              | 55                  | 45    | 100       |
| Education          |                     |       |           |
| <=Secondary        | 32                  | 35    | 67        |
| >=Secondary        | 23                  | 10    | 33        |
| Total              | 55                  | 45    | 100       |
| Income             |                     |       |           |
| Yes                | 26                  | 2     | 28        |
| No                 | 29                  | 43    | 72        |
| Total              | 55                  | 45    | 100       |
| Types of family    |                     |       |           |
| Joint              | 43                  | 24    | 67        |
| Nuclear            | 12                  | 21    | 33        |
| Total              | 55                  | 45    | 100       |

\( \chi^2 (1)(n=100)= 6.64, p<0.01, \chi^2 (1)= 3.84, p=0.05, \chi^2 (1)(n=100) = 10.83, p<0.001. \)

(64%) residing at old age home experienced severe depression while the majority of the respondents who were living with the family experienced mild depression. The findings are consistent with the previous studies that found higher level of depression among institutionalized older people than those of older people living with the family [12,14,19,20].
Nursing implications

The study showed varied levels of depression, among older adults residing in an old age home and those living with the family. The results of the study will help the nurses to understand the level of depression and puts light on functions and roles of nurses in Geriatric clinics and Geriatric homes. Nurses can implement proactive strategies to prevent depression, to promote early detection of symptoms and to ensure access to effective treatment in older people. Nurses have a key role to play in providing the appropriate psychological, spiritual, social and physical support that can lead to improvement in quality of life for older people.

This study will enable the nurses to prepare teaching guidelines for prevention and management of depression. Thus, nurses can build good health of the community by providing information to help elderly clients manage depression and prevent the occurrence of depression. Furthermore, the nursing curriculum must give more importance for early detection and prevention of depression among older clients and cost effective non-pharmacological interventions as adjuvant therapy to reduce depression. The curriculum should incorporate non-pharmacological interventions like Horticulture therapy, Pet therapy and Music therapy. In the service arena, in-service education and seminars on the care of older people with specific references on depression can be conducted to improve knowledge of health professionals regarding non-pharmacological interventions for prevention of geriatric depression. Nurses should also implement outreach program in collaboration with other agencies to make the public aware about influence of institutionalization on depression of older clients.

Limitations

Small number of subjects was used to conduct this study thus limiting the generalization of the findings. Sample was limited only to specific community and one old age home.

Conclusion

Depression was found among older adults residing in an old age home and those residing with the family. However, the older adults residing at old age home had severe depression four times more than older adults living with the family. Nurses and other health care providers need to be be vigilant about the problem and address it. According to Lazarus and Folkman, adaptive responses would indicate no depression and maladaptive responses would indicate depression [16]. Since nurses spend a considerable time with older people at the old age home, they are in pivotal position to assist them in identifying signs and symptoms of depression, and prevent or manage depression. The study can be replicated with a larger sample so that the findings can be generalized to a larger population. The study can be replicated in other states of India; both urban and rural areas. A descriptive study can be done to assess the level of depression, coping strategies and life style behaviour of older people with diabetes, hypertension and asthma as these health problems were commonly seen in the respondents of the study.

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Citation: Mahat A. The Level of Depression among Older Adults Residing at Old Age Home and with the Family in an Urban Community of India. SM J Nurs. 2018, 4(1): 1020.