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Research Article

Prevalence of Depression and Drug Use Pattern among Elderly People in Living in Old Age Homes in Kathmandu

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Abstract

Among 150 respondents, 25 [16.67%] respondents were normal. Out of theses 25respondents, 98 [65.33%] and 27 [18%] respondents had mild and severe depression respectively according to GDS. Regarding the socio-demographic information of the respondents, 7.33% were of age 60-64yrs, 10.66% were of 65-69 yrs, 31.33% were of 70-79 yrs, and 51.33 were of >80 yrs. 100 percent of the elderly people were regularly using drugs, and the average patient was regularly using more than 21 drug classes. The most common classes of drugs used by the older people living in Old Age Homes were antihypertensive agents [9.33 %], vitamins [8.67 %], cardiac drugs [3.33%], cardiovascular dilators [2%], laxatives [6%], and tranquilizers [4%], diuretics [6.67%], and least class of drug used was sedatives i.e. [0.67%], and following drugs classes were hypnotics [6%], antidepressants [2.67%], anti-arrhythmic drugs [3.33%], pulmonary drugs [4.67%], antacids [5.33%] and anti-secretary agents [4%].

Keywords: Old age homes, hypnotics, antidepressant, depression, drug pattern

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INTRODUCTION:

In Nepal, individuals over 60 years of age are considered elderly. According to the 2011 census of Nepal, there were 2.1 million elderly inhabitants, which constitute 8.1 percent of the total population in the country.[1] Depressive symptoms are common in elderly patients with COPD; prevalence and/or severity of depressive symptoms may be greater in those who are most disabled.[2] Depression mainly affects those people who have chronic medical illnesses and cognitive impairment, family disruption, and disability, worsens the outcomes of many medical illnesses, and increases mortality.[3]The three factors that are significantly associated with the development of depression are lack of satisfaction with life; feelings of loneliness; and smoking.[4] The outcomes of elderly depression are social deprivation, loneliness, poor quality of life, and increased use of health and home-care services, impairments in activities of daily living, chronicity, suicide and increased non-suicide mortality.[5] Hence, it is necessary to identify depressive elderly patients and provide a proper planning for discovering related factors and implement feasible therapeutic plans for such depression. [6]In Nepal traditionally old age home is designed only for the elderly who do not have their children to take care of them. And many of these are located in the religious places. But recently with the effect of modernization, urbanization, nucleation of family, migration of youths to urban area, and foreign countries those people who prefer to live in the old age homes are increasing. But, due to limited capacity and limited number of OAH, community people have started to open OAH in the different parts of the country.[7]The combined results of studies of risk factors for depression among elderly community subjects indicate that five factors bereavement, sleep disturbance, disability, prior depression, and female gender are significant risk factors for depression.[8] The factors that are associated with a higher incidence of depression are living in a rural area, being illiterate, without a mate, low income, experiencing a significant stressful life event; poor sleep pattern, poor functional status, and poor cognitive function. Logistic regression analysis indicates that elderly participants with hypertension are significantly more likely to develop depression symptoms under conditions of illiteracy, experiencing a significant stressful life event, poor prevented by appropriate lifestyle changes and psychological health

education.[9]Although psychoactive drugs substances that directly participate in the ongoing function of the nervous system] have been used for medical, cultural, religious, and recreational purposes for thousands of years, it is only during the last 100 years that the view of psychoactive drugs as magical potions and recreational agents has begun to be tempered by the rise of science, advances in chemistry, and changes in cultural traditions and mores. Within this larger historical context, psychopharmacology emerged relatively recently as an established science, yielding important classes of therapeutic agents targeting psychosis, depression, and anxiety. The effectiveness, safety, and tolerability of many of these agents have rendered them among the most widely used prescription agents in the world. [10]

MATERIALS AND METHOD:

The conceptual framework of the study is based on the socio-demographic factors, individual factors and contextual factors as shown in figure no.1. In this study, socio-demographic factors consist of educational status, occupational status, sex, ethnicity, marital status, religion, types of family and number of offspring; individual factors consists of presence of chronic illness, worries of the elderly, coping strategies, duration of stay and contextual factor including type of organization, caring system and mind diversion activities.

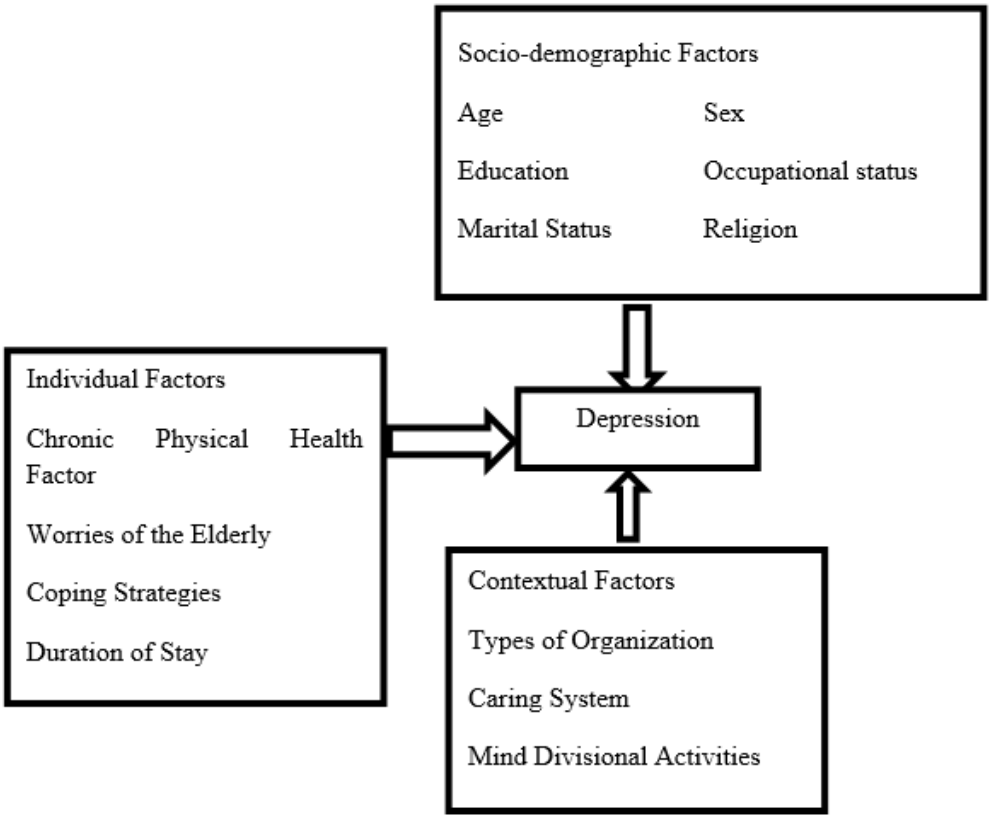

Figure 1: Conceptual Framework

Research Design and Duration

The data was collected at one point of time with individual respondents. Therefore, the research design was cross-sectional. The various independent factors like age, occupational status, educational status, age etc. were identified in this study and the associations between independent and dependent factor i.e. depression was tested for its significance. Therefore, the design of this study was descriptive analytical. The research duration was six months.

Data Collection Tools

The interview schedule regarding socio-demographic and other variable a related information was developed by the researcher. The Geriatric Depression Scale [GDS] was used for assessing depression. The GDS was first developed in 1982 by J.A. Yesavage and others. The GDS is a questionnaire which is widely used as a screening tool for depression in the elderly. The respondents was asked to respond to 30 questions by answering 'yes' or 'no' in reference to how they felt on the day the interview was taken. Scores of 0-9 indicated normal, 10-19 mild depression and 20-30 indicated severe depression. The GDS has excellent reliability and validity [test-retest reliability = 0.85, internal consistency = 0.94]

Data Collection Procedure

In order to assure the quality of research, the quality in each research process was planned. The researcher visited the above mentioned old aged homes. Prior permission was taken from the authorities of the organization. In order to reduce the systematic error in quantitative study, the standardized instruments were used. The data was collected individually by interview technique using the socio-demographic and other independent variables related tool, GDS. Informed verbal consent was taken from each respondent prior to data collection. All interview forms were reviewed daily for completeness by the enumerator and were checked for correctness and accuracy by the researcher.

Validity and Consistency of Instrument

Validity of instrument was maintained by studying and reviewing the related literature, consulting with concerned

advisors, teachers, and researchers and colleagues from the beginning and throughout the study. Consistency of instrument was maintained by pretesting on 10% of the respondents of Kathmandu, Old Age home Nisaye Sewa Sadan, Budanilkantha Social Care Centre, and Second Inning Pvt. Ltd. The pretesting sample populations were not included in the final study.

RESULT AND DISCUSSION

This chapter deals with the analysis and interpretation of data obtained from questionnaire on "Prevalence of Depression and Drug use Pattern among elderly people living in Old age Homes in Kathmandu".The collected data were compiled, analyzed and tabulated considering objectives of study. The analyzed data were interpreted with the table of utilizing simple statistical methods.

N=150

NAME OF ORGNIZATION	FREQUENCY	PERCENTAGE
Nisaye Sewa Sadan, Tinkune	89	59.33
Budanilkantha Social Care Centre, Budanilkantha	29	19.33
Second Inning Pvt. Ltd., Mandikhatar	32	2.33
TOTAL	150	100%

The present study was carried out with the objective to assess the level of anxiety and depression and factors associated with Depression among elderly living in old aged homes in Kathmandu Valley. The study was cross-sectional and descriptive analytical in nature, with a sample size of 150. The tools used for the study was Geriatric Depression Scale. The data was analyzed using Descriptive and excel.This finding of our study is supported with similar studies conducted on the study of depression among geriatric population in Nepal, which showed that 53.2% of the samples experience depressive illness according to GDS.[11] Similarly another study from a tertiary level hospital in Nepal conducted among hospitalized geriatric medical inpatients concluded that 57.1% of hospitalized geriatric patient had depressive symptoms and 17.3% of healthy community dwelling had depression.[12] A study conducted on prevalence of depression among institutionalized elders in Colombo showed 56% of population had depression.Study conducted on community dwelling areas of West Bengal showed 53.7% depression.[13] Cross-sectional descriptive survey done at elderly welfare centre and public health centers in Korea showed the prevalence of depression to be 63%.[14] In contrast to above studies, there are studies which showed prevalence of depression among elderly to be lower than the above figures. The overall prevalence of depressive disorder among the elderly population of rural areas of Udupi district, Karnataka, India was found to be 21.7%.[15] This difference in the prevalence with this study might be due to the different instruments used for measuring depression. But other studies which used the same instrument as our study to detect depression, also showed lower figure. The prevalence of depressive symptoms among community-dwelling elderly Sri Lankans was 27.8%.[16] A study done on the prevalence of depression among elderly in an urban area of Selangor, Malaysia found that prevalence of depression among elderly was 6.3%.[17] Using the key score and leveling the margins for mild and severe depression, the study showed that among the depressed population, 70.42% had mild depression while 29.58% had severe depression. This result is in accordance with other studies which also showed that higher percentage of elder population suffered from mild depression than severe using GDS.[18] Relating the socio-demographic variable and prevalence of depression, in this study it was found that there was significant association between the prevalence of depression and history of physical illness. This result is supported by the study done in Taiwan, which found out that there was high risk of depressive disorders among those with physical illness.[19] Similarly, study conducted in Srilanka found that there was significant correlation of depressive symptoms with physical disability.[20]In our study, the most common reason for admission in old age home was no presence of offspring. It was similar to the one reported by study from Colombo by Wijeratne.[21]

Level of Depression

Regarding level of depression, 25 [16.67%] respondents were normal. 98 [65.33%] and 27 [18%] respondents had mild and severe depression respectively according to GDS. [Table no. 17]. Similar research finding revealed that out of 100 senior citizens, the prevalence of depression in the study population was 56%, of which 23.2 % had severe depression according to GDS. The prevalence of depression was found to be 30.1% according to GDS in one study whereas in another study it was 25% .Some other studies have varied results: out of 250 elderly, 23.6% had depression and out of 120 elderly people, 38 [31.5%] had mild and 49 [41%] had severe depression based on Beck Depression Inventory .

Drug use among Geriatric people

100 percent of the elderly people were regularly using drugs, and the average patient was regularly using 1.9 drug classes. The number of drug classes increased with advancing age. According to Journal of American Geriatric Society 2019 approximately 80 percent of the elderly, in comparison with 40 percent of patients under 65, have one or more chronic disorders. The existence of multiple acute and chronic disorders in this age group probably is a major factor in the increased use of drugs.

Anti-depressants drugs used by geriatric people

SSRIs are the majority used drugs i.e. 66.66% which includes Citalopram, Escitalopram and Sertraline.

Dose and administration of Anti-depressants drugs

When antidepressant medication therapy is indicated in the elderly, most patients can be initiated on citalopram 10-20 mg a day or sertraline 25-50 mg a day. As part of initiating treatment, patients should be screened for high-risk factors and referred for more immediate treatment if high risk factors.

CONCLUSION:

Regarding depressed answers; majority of respondents did not have the feeling of being full of energy and were not hopeful about the future. The study showed that majority of elderly had depression. Among them, more were females. The respondents who had depression; different types of worries like financial security, lack of social relation, lack of favorite activities, fear of future and dissatisfaction with environment of the elderly homes; feeling of stress and those who used coping strategies like self-blame were found to have depression. This study also concludes that the female respondents and those who have Diabetes, Hyperthyroidism, Parkinsonism and Gastro Intestinal problems, were more at risk of having depression. Moreover, the respondents, having respiratory and musculoskeletal problems and other worries were more at risk of having anxiety. The worries regarding financial security, lack of favorite activities and lack of social relation led to more risk of having depression. Moreover, the respondents having worries regarding dissatisfaction with old age and dissatisfaction with elderly home officials as well as fear of future and dissatisfaction with environment of the elderly homes were more at risk of having depression. 100 percent of the elderly people were regularly using drugs, and the average patient was regularly using 1.9 drug classes. The most common classes of drugs used by the older population were antihypertensive agents and vitamins and least class of drug used was sedatives. All the drugs are prescribed by the qualified doctors and timely drugs was given to elderly people by qualified nurse. SSRIs are the majority used drugs which include Citalopram, Escitalopram and Sertraline. These have the lowest potential for drug-drug interactions based on their cytochrome P-450 interactions. Venlafaxine, mirtazapine, and bupropion are also considered to have a good safety profile in terms of drug-drug interactions. When antidepressant medication therapy is indicated in the elderly, most patients can be initiated on citalopram 10-20 mg a day or sertraline 25-50 mg a day.

REFERENCES:

1. Shrestha L. Geriatric health in Nepal: concerns and experience. Nepal med coll J. 2012; 15(2):144-18.
2. Yohannes AM, Roomi J, Baldwin RC, Connolly MJ. Depression in elderly outpatients with disabling chronic obstructive pulmonary disease. Age Ageing. 1998 Mar; 27(2):155-160. https://doi.org/10.1093/ageing/27.2.155
3. Nisha N. Study on depression in the elderly with diabetes in an urban Government Hospital out-patient setting (Doctoral dissertation, Madras Medical College, Chennai).
4. B. H. Green, J. R. M. Copeland, M. E. Dewey, V. Sharma, P. A. Saunders, I. A.Davidson, Risk factors for depression in elderly people, Acta Psychiatrica Scandinavica, September 1992; 2:414-425.
5. Palsson Sigurdur; Skoog, Ingmar, International Clinical Psychopharmacology, December 1997; 3-14. https://doi.org/10.1097/00004850-199712007-00002
6. Shadi Ghaderi, Robab Sahaf, Farahnaz Mohammad Shahbalaghi, Gholamreza Ansari, Azizeh Gharanjic, Kazem Ashrafi, Negin Taheri, Farid Najafi, Prevalence of Depression in Elderly Kurdish community, Salmand: Iranian Journal of Ageing, 2012; 7:57-66.
7. Hom Nath Chalise, Depression among elderly living in Briddashram (old age home), Advances in Aging Research, 2014; 3(1):6. https://doi.org/10.4236/aar.2014.31002
8. Sreejith S. Nair, S.G. Hiremath, Ramesh, Pooja, Sreekanth S. Nair, Depression among geriatrics: Prevalence and associated factors, IJCRR, 2013; 5(8):110-112.
9. Lina Ma, Zhe Tang, Fei Sun, Lijun Diao, Yun Li, Risk factors for depression among elderly subjects with hypertension living at home in China, February 15, 2015; 8(2):2923-2928.
10. Joseph A. Lieberman III, M.D., M.P.H., History of the Use of Antidepressants in Primary Care, Primary Care Companion J Clin Psychiatry, 2003; 5(7):6-10.
11. Mark Olfson, MD, MPH; Steven C. Marcus, PhD, National Patterns in Antidepressant Medication Treatment, Arch Gen Psychiatry, 2009; 66(8):848-56. https://doi.org/10.1001/archgenpsychiatry.2009.81
12. Preskorn SH, Recent pharmacologic advances in antidepressant therapy for the elderly, The American Journal of Medicine, 01 May 1993; 94(5):2-12
13. Waite, J., Grundy, E., & Arie, T. A controlled trial of antidepressant medication in elderly in-patients, International Clinical Psychopharmacology, 1986; 2:113-126. https://doi.org/10.1097/00004850-198604000-00003
14. Michael E. Thase, MD, and Thomas L. Schwartz, MD, Choosing Medications for Treatment-Resistant Depression Based on Mechanism of Action, J Clin Psychiatry 2015; 76(6):720-727. https://doi.org/10.4088/JCP.14052ah2c
15. Bourin M, David DJ, Jolliet P, Gardier A, Mechanism of action of antidepressants and therapeutic perspectives, Therapie, 01 Jul 2002; 57(4):385-396.
16. Ignacio Montorio, María Izal, The Geriatric Depression Scale: A Review of Its Development and Utility, International Psychogeriatrics,March 1996; 8(1):103-112. https://doi.org/10.1017/S1041610296002505
17. J. Wancata, R. Alexandrowicz, B. Marquart, M. Weiss, F. Friedrich, The criterion validity of the Geriatric Depression Scale: a systematic review, December 2006; 14(6):398-410. https://doi.org/10.1111/j.1600-0447.2006.00888.x
18. Robert Charles Baldwin, Poor prognosis of depression in elderly people: causes and actions, Annals of Medicine, 2000; 32(4):252-256. https://doi.org/10.3109/07853890009011769
19. Rupert Jackson, Bob Baldwin, Age and Ageing, Oxford Academic, September 1993; 22(5):349-353. https://doi.org/10.1093/ageing/22.5.349
20. Bibring, E, The mechanism of depression, October 2016, Page (13-48)
21. George W. Comstock and Knud J. Helsing,, Psychological Medicine , 1977; 6(4):551 - 563. https://doi.org/10.1017/S0033291700018171