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RESEARCH ARTICLE

A STUDY ON LIFESTYLE AND MORBIDITY PROFILE OF GERIATRIC POPULATION IN LUCKNOW

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ABSTRACT

Background: It is estimated that the no. of elderly persons would grow to 137 million by 2021 in our country. Aging is an universal process. Old age is associated with physical, mental and social problems. Life style characteristics are important in determining the quality and quantity of life.
Objective: To determine the biosocial characteristics and morbidity profile of elderly and to suggest measures to reduce morbidity among the elderly.
Material and Method: A cross-sectional study was done among elderly in two small urban slums(population<5000) >=60 yrs. A total of 100 elderly were selected and multi stage random sampling technique was employed. A predesigned and pretested questionnaire was used and house to house survey was done. Data was entered in MS Excel and analyzed using SPSS 11.5 version and the results were recorded as frequencies, means ± standard deviations and p-values. . Chi-square test was used for categorical variables. A p-value of <0.05 was taken as the criteria of significance.
Results: The Mean age was (SD) 63.98(4.26) yrs. The mean age (SD) of males was 65.06 (4.39) yrs. The mean age Of females was 62.90(3.90 yrs).Majority of respondents were married (64.16%) belonged to lower SES(71.12%).Most of the respondents were vegetarians (53.44%0.Among men the major addiction was Smoking (63.0%).Whereas among women the major addiction was tobacco chewing(21.0%).Besides Emotional problems (75%),senile cataract (64.5%)was the common illness followed by osteoarthritis (56%).Most (29.77%) of women spent their leisure time in religious activities whereas most(33.15%) of the men spent the leisure time in socializing.
Conclusions: In our study the emotional problem of the elderly was high and the eye problems were also significant so measures should be undertaken to address this aspect of the elderly health. Measures should also be undertaken to address the problem of tobacco addiction among elderly.

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INTRODUCTION

One of the most important consequences of fertility control and of improvements in the expectation of life at birth of the populations all over the World, is the ' Aging of the Population' characterized by the relatively rapid increase of the aged population i.e. the population aged 60 years and above. There are no United Nations standard numerical criteria but the U.N agreed cutoff is 60+ years when referring to elderly populations. Consequently, given problems like high levels of morbidity (Alam, 2006; Rajan *et al*., 1999; World Bank, 1993)[2,3,4] and commensurately high health care expenses (Nyce and Schieber, 2005)[3], well being of the elderly have been threatened. Population projections indicate an increasing graying of world's population, with the share of persons aged 60 yrs and above increasing from 9.5% in 1995 to 30.5% in 2150 (United Nations,2005)[5].The growth rate of the elderly population varies between countries, but is expected to be high in Afro-Asian countries. In India the share of aged has increased from 6.5% (1981) to 7.4% (2001) and is expected to constitute about a fourth of the population by 2075. The National Social Assistance Programme (1995) made the first attempt to provide a social security network to the elderly through the provisioning of, inter alia, a pension scheme for the elderly destitute. The National Policy on Older Persons (1999) is another major step forward in this regards. Intervention areas include financial security, health care, shelter, welfare, and other needs of elders; protection against abuse and exploitation; opportunities for developing the potential and participation of

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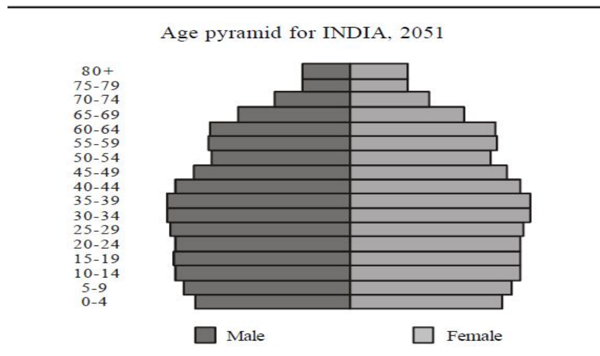
elders; and services to improve quality of life of elders. The concept of healthy aging enunciated in this policy was further reiterated in the National Population Policy of 2000. In particular, the impact of economic independence and living arrangements on well being and health status of the elderly is an area that has generated considerable interest among researchers .The effect of economic independence on quality of life of the aged was examined by Rajan and Kumar (2003)[7], while the relationship between old age poverty, chronic ailments and lack of functional autonomy among elderly were studied by Alam and Mukherjee (2005)[8]. Rajan and Kumar (2003)[6] have addressed the issue of living arrangement among Indian elderly and argued that restoring familial care of the elderly is much needed in the wake of modernization.



Percentage of Elderly 60 and Above by Sex, 1901-2051

MATERIALS AND METHODS

A cross-sectional study was done among elderly in two small urban slums (population<5000) >=60 yrs. A total of 100 elderly were selected and multi stage random sampling technique was employed. A predesigned and pretested questionnaire was used and house to house survey was done. Data was entered in MS Excel and analyzed using SPSS 11.5 version and the results were recorded as frequencies, means ± standard deviations and p-values. . Chi-square test was used for categorical variables. A p-value of <0.05 was taken as the criteria of significance.

District profile

Lucknow is centrally placed district of Uttar Pradesh, spread over an area of 2528 sq kms, which constitute 0.85% of the total area of country. In 2011[23], the district Lucknow has a population of about 4,588,455. There are 906 females per 1000 males. Main languages spoken in the district are Hindi and Urdu.

Geographical profile

Location

Lucknow, the capital of Uttar Pradesh, is situated 125 meter above the mean sea level. It is situated between $26^0$30, and $27^0$10, North Latitude and $80^0$30' East Longitude. It is situated on the banks of the river Gomati, which flows from West to East. The district of Lucknow district presents the Gangetic plains of Uttar Pradesh, which physiographically falls under the 6th agro climatic zone i.e. central zone, also known as mid plain zone.

Climate

The climate of Lucknow district is sub-tropical. The average normal rainfall of the district is 953 mm. It receives maximum rainfall during the three months of July, August and September which accounts for 70%-75% of the total rainfall. The temperature varies from a maximum of about 45^0 Celsius in summer to a minimum of about 5^0 Celsius in winter season.

Demographic profile

Literacy rate of Lucknow is 79.3% (Male-84.3%, Female-73.9%) (Census 2011)[23].

Study area

The study was conducted in the urban mohallas of old Lucknow.

Study unit

People of either sex, 60 yrs of age and above residing in the two selected urban areas.

Study design

It was a community based cross sectional study.

Study period

The period of study was 6 months from October 2011 to April 2012 which was used for the development of study tools, collection of data, analysis and presentation of findings.

Sampling technique

Multistage random sampling techniques was used to select the study unit.

Inclusion criteria

- Elderly residing for at least six months in the area were be considered as a resident and included in the study.
- Elderly whose native place is other than present place of residence but the duration of stay was more than six months were included in the study

Exclusion criteria

- Those elderly living in the area for less than six months were not included in the study.
- Those elderly, who were non cooperative or refused to provide necessary information, were not included in the study.

Tools of investigation

A predesigned and pretested interview schedule was used to elicit information on sociodemographic characteristics and required information.

Pretesting of the interview schedule

The schedule was pretested in a sample of 10 elderly. Necessary modifications were made in the schedule to overcome the difficulties encountered during pretesting.

Data collection

First household was selected randomly and then consecutive household was surveyed till the desired number of study units completed. Each participant was explained about the purpose of the study prior to administration of tool. Informed consent was taken from each participant. The confidentiality was assured. Interview was started with general discussion to gain confidence and it slowly extended to the specific point. Each individual aged 60 years and above were informed in his or her own house. For all those who could not be contacted in the first instance, two further visits were made before declaring the subject unavailable. The purpose of the study was explained and confidentiality of the information was assured. The socio-demographic data of all the patients was recorded. The variables studied included the age, sex, rural/urban background, literacy status. The religion, caste, education status, occupation and total family income and per capita income was calculated. The socioeconomic status was determined using Modified B.G. Prasad classification 2012. A detailed history was also taken regarding housing and sanitary condition along with the history of present and past illness. The housing and environmental assessment is an important aspect of the elderly health and well being. An enquiry into the type of house, overcrowding, water, sanitation and drainage facilities were undertaken. Ventilation and lighting conditions were also assessed. An enquiry was also made of personal habits and hygiene. The parameters that were included in the personal habits and hygiene were enquiries about the frequency of bathing whether daily alternate day or occasionally. Hand washing is considered a very important component for prevention of diseases and so enquiries were made about hand washing before meals and after defecation. Oral hygiene is frequently neglected aspect in the elderly and enquiries were made about the cleaning of teeth. Due to the various morbidity and mental health problems coupled with the pressures of the everyday life the elderly often took to addictions and questions were asked about alcohol or tobacco addiction of the elderly. The examination included the measurement of pulse, Blood pressure measurement, height and weight measurement and waist hip ratio measurement.

Blood pressure measurement

The Blood pressure measurement classification was done on the basis of JNC VII criteria and the elderly were classified as normal, prehypertension, stage one and, stage 2.

Body Mass Index

The Body Mass Index was calculated based on the height and weight measurement. The height was measured using a steel tape and weight was measured using the normal weighing machine.

Waist-Hip measurement

The waist was measured at the midpoint of lower margin of last palpable rib and top of iliac crest in concordance with the W.H.O STEPS protocol for measuring waist circumference (W.H.O. 2008b). The terms; Non-vegetarian, smoker, alcoholic were defined prior to the start of study. Verbal consent was taken from the participants. Data was entered in MS Excel and analyzed in SPSS 11.5 version statistical software.

Definition of household

A household is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from doing so (Census 2011)[23]. Persons on a household may be related or unrelated or a mix of both. However, if a group of unrelated persons live in a house but do not take their meals from the common kitchen then they are not constituent of a common household.

RESULTS

- Majority of the respondents were married (64.16%), belonged to lower SES (71.12%), and lived in a joint family (61.01%).
- Most (53.44%) of the respondents were vegetarians.
- Among men, the major addiction was smoking (63.0 %), whereas among women, the major addiction was tobacco chewing (21%).
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Table 1. Biosocial characteristics

Biosocial Characteristic	Males (n=57)	Females (n=43)	Total (n=100)
Caste			
General	17(30)	12(28)	29(29)
OBC	40(70)	31(72)	71(71)
Marital status			
Married	37(65)	20(47)	57(57)
Widow/widower	20(35)	23(53)	43(43)
Type of family			
Nuclear	20(35)	19(44)	39(39)
Joint	37(65)	24(56)	61(61)
Socioeconomic status			
III	4(7)	1(2)	5(5)
IV	30(53)	15(36)	45(45)
V	23(40)	27(62)	50(50)

In our study more than one third (43.8%) of the males and 16.2% of the females of urban area were pre-hypertensive. However, 36.3% males and 35.5% females in urban area were pre-hypertensive. In all 39.4% of males and 24.1% of females were prehypertensive. 14.6% of males and 11.7 % of females of rural areas and 19.4% of males and 11.8% of females of urban areas belong to Stage 1 hypertension group. Overall 17.4% of males and 11.8% of females belonged to stage 1 hypertension group.

Overall 6.1% of males and 4.3% of females belonged to stage 2 hypertension group.

- Most (29.77%) of the women spent their leisure time in religious activities, whereas most (33.15%) of the men spent their leisure time in socializing.
- Besides emotional problems (75%), senile cataract (64.5%) was the common illness followed by osteoarthritis (56%).
- Among the elderly 39.4% had complained of insomnia problems.
- Hypertension had affected 30% of the elderly.
- About 63% of the elderly had been smoking.

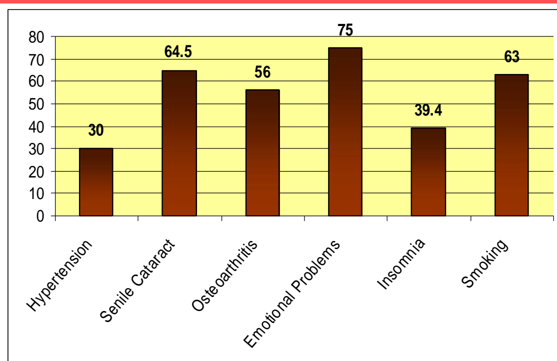
About 35% of the elderly had psychological problems.34% of the elderly had financial problems.11% of the elderly had been neglected in their families and societies. Social problems had plagued about 8% of population. Neglect had been both at the societal level and at the family levels. The elderly had been a neglected lot because of a multitude of factors.

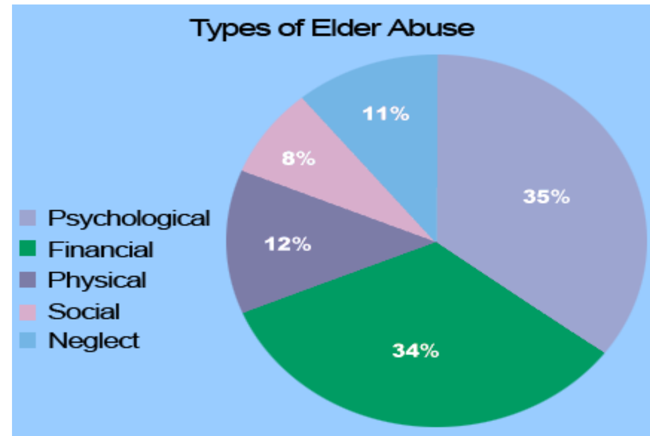
Table 3. Classification of blood pressure for adults

Blood Pressure Classification	SBP mmHg	DBP mmHg
Normal	<120	and <80
Prehypertension	120–139	or 80–89
Stage 1 Hypertension	140–159	or 90–99
Stage 2 Hypertension	≥160	or ≥100

SBP, systolic blood pressure; DBP, diastolic blood pressure

Fig. 2: Morbidity profile of the respondents





DISCUSSION

Background characteristics of population

Majority of the respondents were married (64.16%), belonged to lower SES (71.12%), and lived in a joint family (61.01%). In our study most of the elderly belonged to age group of 65-69 yrs and this corresponds with the findings reported by Singh *et al.* (2005). 59.6% of the males and 82% of the females belonged to Hindu community. 40.4 % of males and 18.0% of females belonged to Muslim community in rural areas. While in urban areas 37.1% of males and 65.8% of females belonged to Hindu community and 62.9% of males and 34.2% of females belonged to the Muslim community. In all, 46.5% of the males and 75.4% of females were Hindu. As per NFHS-3[15], 82.6% of households in Uttar Pradesh were Hindus and 16.3% Muslims. So our study findings are nearly consistent with NFHS-3 data. In our study Majority of the males (78.7%) and females (92.8%) of the rural areas belonged to OBC. 66.9% of males and 88.2 % of females of urban areas belonged to OBC category. In all, 71.8% of the males and 90.9% of the females were OBC. 62.9% of the males and 56.6% of females of urban areas belonged SES V. In all, 63.4% males and 64.7% females belonged to SES V. About 20% of the males and females of both rural and urban areas belonged to SES I, II, III and IV.

Similar studies amongst elderly by Prakash *et al.* (2004) in Udaipur Rajasthan found out that 27% were smokers and tobacco consumers. A slightly higher percentage of elderly males in our study have been found to be tobacco consumers.
In contrast, in other study conducted by Srinivasan *et al.* (2005) it was observed that that 31.7% were alcohol consumers whereas our study has reported that overall alcohol consumers were 16% of males and 5.9% of females. These differences may be due to the difference in sociocultural practices. 63.7% males and 69.7% females of urban area had a fall within 12 months. Less than one third 28.1% of males and 55.9% females in rural area had got injured due to fall within 12 months. However, 44.4% males and 57.9% females in urban area had got injured due to fall within 12 months. In all, 67.9% had a fall and 56.7% got injured due to fall within 12 months. In a similar study by Joshi *et al.* (2003) about 51.5% of subjects had a fall. Injuries had occurred in about 80% population. 36.3% males and 35.5% females in urban area were pre-hypertensive. In all 39.4% of males and 24.1% of females were prehypertensive.

Conclusion

- Majority of the respondents were married (64.16%), belonged to lower SES (71.12%), and lived in a joint family (61.01%).
- Most (53.44%) of the respondents were vegetarians.
- Among men, the major addiction was smoking (63.0 %), whereas among women, the major addiction was tobacco chewing (21%).
- Most (29.77%) of the women spent their leisure time in religious activities, whereas most (33.15%) of the men spent their leisure time in socializing.
- Besides emotional problems (75%), senile cataract (64.5%) was the amongst the common illness followed by osteoarthritis (56%).

Recommendation

- There is a need for geriatrics counseling centers.
- Measures have to be taken to restrict the tobacco addiction.
- Promotion of regular exercise is required.
- Measures would have to be taken to control hypertension in the study population.
- There is an urgent need for more elaborate studies for the aged.

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