



A Study to Assess the Biopsychosocial Needs of Elderly Population in Selected Community Areas, Gurugram Haryana

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Key Words

Elderly population, biopsychosocial needs, dependent, independent and semi-dependent

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ABSTRACT

Biopsychosocial needs refer to the interconnected biological, psychological and social factors essential for an individual's overall health and well-being, emphasizing the integration of physical health, mental health and social relationships. This is the Descriptive research design. 181 elderly population aged 60 years and above were selected by enumerative sampling technique and data was collected by self-structured questionnaire. The results of the study revealed the majority level of Biological, Psychological and Social needs among elderly population were belonged to the >70 Years, with a majority being males 94 (51.9%) and married 102 (56.4%). The majority of participants 170 (93.9%) lived in joint family. Majority of participants 114 (62.9%) had 3 to 5 no. of children and majority of the participants 175 (96.6%) had Hindu religion. The majority of participants (81.2%) exhibited non-communicable disease, followed by 13.3% who were communicable disease. Regarding education, 43.3% of the participants experienced secondary education, while 74.6% were found to be unemployed. The correlation was calculated by using Karl Pearson's correlation formula and a moderate positive significant relationship was observed between biopsychosocial needs ($Kr=0.377$, $p\text{-value}=0.01$). Demographic variables was significantly associated with age, education and marital status ($p<0.005$). Although there was no association found between gender, occupation, type of family, income, no. of children and religion. The results of the study revealed that majority of the participants 68% were dependent followed by 30.90% were semi-dependent and remaining 1.10% were independent. The study has shown a moderate positive relationship between biopsychosocial needs in elderly population at 0.001 level of significance ($r=0.377$).

INTRODUCTION

Biopsychosocial needs are all the requirements related to an individual's entire health, taking into consideration the interconnection of relationships, mental health and physical health. The rapidly rising average adults has brought various global healthcare challenges. In simple words, Biopsychological needs looks after the biological, psychological and social needs or requirements in an individuals life^[1,2]. It is crucial to evaluate the biopsychosocial demands of the senior population in community settings, particularly in Gurugram, Haryana. Ageing Population of world is increasing^[3]. The Census data indicates that the percentage of people 60 years of age and older is increasing, indicating a need for targeted attention to their particular requirements^[4]. Urbanization and Changing Lifestyles offers a unique context where expanding family structures and lifestyles may be reducing traditional support systems. The elderly's social and psychological health may be influenced by this change. Also the senior citizens frequently deal with multiple kinds of health problems, such as chronic illnesses, limited mobility and sensory impairments. Identifying the particular health issues might be helpful in changing healthcare services according to the needs of the people. Furthermore anxiety, depression and memory impairment are some of the mental health conditions that are more common with increasing age. Assessing these problems may serve in the development of included mental health interventions. This mental health issue can lead to social isolation in the senior citizens who live in urban areas and can have a harmful effect on their mental health. Understanding the severity and consequences of social isolation can help develop community-based social networks. In order to provide more effective and compassionate care and support systems for this demographic, stakeholders can gain an extensive knowledge of the complex problems that this group faces by conducting a study to assess the biopsychosocial demands of the elderly. For our present study minimum studies are conducted in India^[5]. As far as we know, no same study is done in our particular region. Therefore, the study is conducted to assess the biopsychosocial needs of elderly population in selected community areas, Gurugram, Haryana.

MATERIALS AND METHODS

Study Design and Setting: The study has adopted a quantitative research approach is used. An enumerative sampling technique was used to select 181 elderly population of having 60 years of age and above. The inclusion criteria were: having age 60 years and above, presently residing in the selected community area, they could understand Hindi language, willing to participate in the study. And the

exclusion criteria included: clinically diagnosed with any cognitive or neurological problems or any other disability and illness, elderly those who were not present at the time of data collection, elderly who were not willing to participate in the study.

Development of Data Collection Tool:

The Tool Consists of Two Instruments: A demographic profile and a structured questionnaire about biopsychosocial needs. The socio-demographic questionnaire consisted of 10 items, including participant's age, gender, education, occupation, marital status, monthly income, no. of children, type of family, religion and disease condition. The structured questionnaire consists of 30 multiple questions on biological needs, psychological needs and social needs of elderly population. Each item was awarded a score '0' for never and '2' for yes. The scores were categorized as never (0), sometimes (1) and yes (2). The content validity was assessed by computing the percentage of agreement amongst the six experts in the field of Obstetrics and Gynecology (OBG), Community Health Nursing (CHN), Child Health Nursing (CHN), Mental Health Nursing (MHN) who provided their feedback on the item's relevance and accuracy. The validated tool in the English language was translated into Hindi language and its linguistic validity was confirmed by translating it back to English. The reliability coefficient was calculated after pre testing of the instrument on five participants to assess items clarity. A r value of 0.377 was obtained by applying the Karl Pearson's correlation coefficient. According to the questionnaire's item analysis, each of the 20 items had a difficulty index between 20% and 80%, indicating that they were all appropriate. Two items with a poor discrimination index were kept after modification, whereas eighteen items had an acceptable discrimination index.

Data Collection: Ethical considerations were diligently followed in this study. This study was carried out from 6th Dec 2023-31st July, 2024. Although, the respected institute has given data collection period from 1st April -31st April 2024, but due to limited availability of samples during the data collection time, the data collection time period was extended till 15th June, 2024 Prior to participation, informed consent was obtained from the participants and they were provided with a participants information sheet. The collected data were encoded in SPSS version 22 for further analysis.

Ethical Considerations: This research project adhered to ethical guidelines and obtained the necessary permissions and approvals. Formal written permission was obtained from the Dean of the College of Nursing (CON), SGT University, Gurugram, Haryana and

Sarpanch, Budhera, Gurugram, Haryana. Participant selection followed specific inclusion and exclusion criteria and efforts were made to establish a rapport with the subjects, ensuring they were fully informed about the study's purpose and procedures. Informed consent was obtained from subjects who fulfilled the inclusion criteria, emphasizing their voluntary participation and the freedom to withdraw from the study at any time when they want to do so.

Plan for Data Analysis: The Statistical Package of social sciences (SPSS), Version 22.0 developed by IBM (International Business Machines) was used for analysis. Frequency and percentage were calculated for nominal data, and continuous data were given as a mean and standard deviation. The association was found between variables using the Chi square test and correlation was calculated by using Kart's person correlation coefficient for finding the relationship between variables.

RESULTS AND DISCUSSIONS

The results obtained from the study is summarized under the following headings:

- **Section 1:** Characteristics of study participants (Demographic variables)
- **Section 2:** Level of Biopsychosocial needs.
- **Section 3:** Relationship between Biopsychosocial needs.
- **Section 4:** Association between Demographic variables and Biopsychosocial needs.

Section 1: Characteristics of Study Participants (Demographic Variable): Data presented in (table 1), shows that the majority of the participants 85 (47%) were belonged to the >70 years followed by 62 (34.3%) were belonged to the 60-65 years and the remaining 34 (18.7) belonged to the 66-70 Years. With regard to the gender of the participants, 94 (51.9%) were males and 87 (58.1%) were females. As per the data regarding marital status, majority 102 (56.4%) were married followed by 76 (42.0%) were widow/widower. The remaining accounted for divorced/separated 3 (1.6%) of the participants. Data on type of family showed that 170 (93.9%) had joint families and remaining 11 (6.15) were staying in nuclear families. Data on the number of children showed that 114 (62.9%) had 3-5, followed by 65 (35.9%) had 0-2 and remaining 2 (1.2%) had children >5. Data on the type of religion showed that 175 (96.6%) were Hindu, followed by 5 (2.8%) were Muslim and remaining 1 (0.6%) were Sikh. There was no participants who had their religion as Christian. Data on education showed that, 78 (43.3%) mentioned their education level as secondary education followed by 50 (27.6%) for no formal education. 29 (16.2%) had primary education, 10 (5.5%) had high school education, 8 (4.1%) were having

primary education and remaining 6 (3.3%) were post graduates. With regard to occupation of the participants, majority 135 (74.6%) were unemployed, 46 (25.4%) were self-employed and remaining 0 (0.0%) were employed. As per the data on disease condition, majority of the participants 147 (81.2%) were suffering from non-communicable disease i.e. pain, fracture, diarrhea etc. followed by 24 (13.3%) communicable disease i.e. TB, Asthma, RTI etc. and remaining 10 (5.5%) had no disease condition.

Section 2: Level of Biopsychosocial Needs: The data presented in (Fig. 1) showing the elderly people who were dependent on others for their biopsychosocial needs to be fulfilled was found to be 68.0% whereas 30.9% were semi dependent for their needs. Only 1.10% were found independent. The interpretation for Biopsychosocial needs are 0-20 indicates Dependent, 21-40 indicates Semi-dependent and 41-60 indicates independent. Data presented in (Table 2) showing the mean of biological needs was 11.82 with the standard deviation of 2.73. The mean of psychological needs was 10.71 with the standard deviation of 3.53. And the mean of social needs was 13.65 with the standard deviation of 2.80.

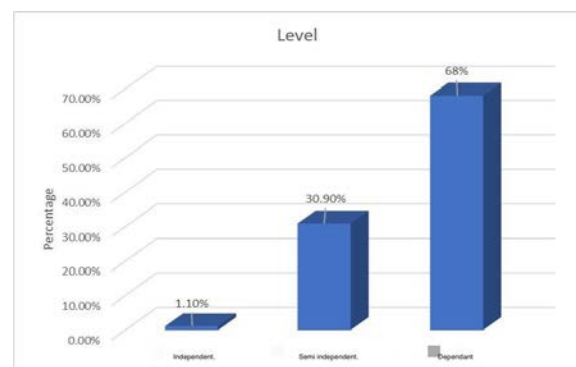


Fig. 1: Bar Diagram Showing Levels of Biopsychosocial Needs

Section 3: Relationship Between Biopsychosocial Needs: The (table 3) showing the relationship between Biological, Psychological and Social needs which was calculated by Kart Pearson coefficient (r). The findings showed the Biological, Psychological and Social needs have moderate positive relationship with each other with r value of 0.377 at $p < 0.05$ level of significance.

Section 4: Association Between Demographic Variables and Biopsychosocial Needs: The (table 4) showing the association between demographic variables and biopsychosocial needs, it was found that Biological, Psychological and Social needs were significantly associated with age, education and marital

Table 1: Frequency Distribution of Participants According to the Demographic Profile n=181

S.NO.	Demographic Variables	Frequency (f)	Percentage(%)
1	Age		
	>70 Years	85	47.00%
	66-70 Years	34	18.70%
	60-65 Years	62	34.30%
2	Gender		
	Female	87	48.10%
	Male	94	51.90%
3	Education		
	No Formal Education	50	27.60%
	Primary Education	29	16.20%
	Secondary Education	78	43.30%
	High School Education	10	5.50%
	Graduate	8	4.10%
	Post Graduate	6	3.30%
4	Occupation		
	Employed	0	0.0%
	Self Employed	46	25.40%
	Unemployed	135	74.60%
5	Marital Status		
	Divorced/Separate	3	1.60%
	Married	102	56.40%
	Widow/ Widower	76	42.00%
6	Income		
	15000 to 30000	41	22.70%
	<15000	121	66.80%
	>30000	19	10.50%
7	No. of Children		
	0-2	65	35.90%
	3-5	114	62.90%
	>5	2	1.20%
8	Type of Family		
	Joint Family	170	93.90%
	Nuclear Family	11	6.10%
9	Religion		
	Hindu	175	96.60%
	Muslim	5	2.80%
	Sikh	1	0.60%
	Christian	0	0.00%
10	Disease Condition		
	Communicable	24	13.30%
	Non-Communicable	147	81.20%
	Nil	10	5.50%

Table 2: Mean and Standard Deviation of Biological, Psychological and Social needs

Area	No of item	Max Score	Mean	Mean %	SD
Biological	10	20	11.82	59.1%	2.73
Psychological	10	20	10.71	53.55%	3.53
Social	10	20	13.65	68.25%	2.80
Total	30	60	36.19	60.31%	6.35

Table 3: Showing Relationship Between Biopsychosocial Needs

Parameters	r Value	p-value	Inference
Biological	0.377	0.01	Moderate Positive Relationship
Psychological			
Social			

Level of significance, $p < 0.05^*$ **Table 4: Association Between Demographic Variables and Biopsychosocial Needs**

Variable	Independent	Dependent	Semidependent	Total	df	Chi-square value	P-value
Age in years							
a) >70years	2	15	68	85	4	14.881	0.005*
b) 66-70 years	0	15	19	34			
c) 60-65 years	0	26	36	62			
Gender							
a) Female	1	24	62	87	2	0.882	0.644
b) Male	1	32	61	94			
Occupation							
a) Employed	0	11	10	21	10	12.947	0.227
b) Self Employed	0	10	15	25			
c) Unemployed	0	35	98	135			
Education							
a) Non-Formal Education	0	10	26	36	6	13.955	0.030*
b) Primary Education	1	4	25	30			
c) Secondary Education	1	20	35	56			
d) High-School Education	0	4	7	11			
e) Graduation	0	3	4	13			
f) Post Graduation	0	9	26	35			
Marital Status							
a) Divorced/Separate	0	0	3	3	4	14.052	0.007*
b) Married	0	42	60	102			
c) Widow/Widower	2	14	60	76			
Income							
a) 15000 to 30000	0	15	26	41	4	7.125	0.129
b) <15000	2	31	88	121			
c) >30000	0	10	9	19			
Number of Children							
a) 0-2	0	23	42	65	12	10.350	0.585
b) 3-5	2	32	80	114			
c) >5	0	1	1	2			
Type of family							
a) Joint Family	2	54	114	170	2	1.077	0.584
b) Nuclear Family	0	2	9	11			
Religion							
a) Hindu	2	54	119	175	4	0.709	0.950
b) Muslim	0	2	3	5			
c) Sikh	0	0	1	1			

Level of significance, $p < 0.05^*$

status ($p < 0.005$). Although there was no association between gender, occupation, type of family, income, number of children and religion. In the present study, the investigator aimed to assess the biopsychosocial needs of elderly population in selected community areas, Gurugram, Haryana.

Discussion is Done Under the Following Categories:

Findings Based on Previous Findings: In the present study, the age of the participants (in years) was divided into 3 categories: Majority of the participants were >70 years 85 (47.0%) followed by the age group between 60-65 years holds the frequency of 62 with the percentage of 34.3% and the remaining belonged to the age group between 66-70 years holds the frequency of 34 with the percentage of 18.7%. This study findings regarding age were found to be consistent with the study done Kerala, India 2017 where 74.2% of its population being >70 years old^[6]. In the present study, majority of them were males 51.90% as compared to females 48.10%. The study done in Kerala, India 2017 was found to be inconsistent who had males 37.0% and females were 63.0%^[7]. The study done in South India was found to be consistent with the present study which accounted for 56.3% as males and 43.8% as females^[8]. A study done in South Korea 2018 was found to be inconsistent with the present study which accounted for 77.8% females^[9]. The findings of the present study showed majority 56.40% of the population were married which was found to be inconsistent with the result findings of the study done in South Korea where 76.2% were widowed^[19]. The study was found to be consistent with the study done in South India 2022 which accounted for 78.2% as married^[10]. The present study revealed that there are more non communicable disease which accounts for 81.20% which was found to be similar or consistent with the result findings of the study done in Telangana, India with more prevalence 91% of the non communicable disease^[11]. In the present study, majority of them had secondary education (43.3%) which was found to be inconsistent with the study done in Himachal Pradesh, India 2022 with 1.3% of them had secondary education^[12]. In the present study, majority of the population 135 (74.6%) were unemployed which was found to be consistent to a study done in Uttarakhand, India 2019 which accounted for 99.5% as unemployed^[13]. In the present study, income of the majority of the participants 66.80% was <15000 which was found to be inconsistent with the study done in Himachal Pradesh, India 2022 who had 47.50% as income <15000^[14]. In the present study, Number of children of the majority of the participants 62.90% who had 3-5 which was found to be consistent with the study done in Himachal Pradesh, India 2022 who had who had 75% as 3-5 number of children^[15].

In the present study, majority of the participants 93.90% lived in joint family which was found to be inconsistent with the study done in Dehradun, Uttarakhand, India 2023 who had 65.9% who lived in joint family^[16]. In the present study, majority of the participants 96.6% had Hindu religion which was found to be inconsistent with the study done in Dehradun, Uttarakhand, India 2023 who had 89.6% as Hindu religion^[17].

Relationship Between Biopsychosocial Needs: The present study has shown that there was moderate positive relationship found between biopsychosocial needs with ($r = 0.377$) and ($p = 0.01$). A similar finding was reported in the study done in Maryland 2008 (37) depicted a moderate positive relationship between biopsychosocial needs with ($r = 0.377$) and ($p = 0.01$)^[18].

Association Between Demographic Variables and Biopsychosocial Needs: In the present study, it was found that demographic variables was significantly associated with age, education and marital status ($p < 0.005$). Although there was no association between gender, occupation, type of family, income, no. of children and religion. A study done in South India demographic variables was associated with age, gender which was in concordance with the findings of the present study ($p < 0.005$)^[19].

CONCLUSION

The results of the study revealed that majority of the participants 68% were dependent followed by 30.90% were semi-dependent and remaining 1.10% were independent. The study has shown a moderate positive relationship between biopsychosocial needs in elderly population at 0.001 level of significance ($r = 0.377$).

REFERENCES

- Engel GL., 1978. The biopsychosocial model and the education of health professionals. *Ann N Y Acad Sci.* 310: 169-187.
- Marschall A., 2023. Understanding the Biopsychosocial Model of Health and Wellness. *Verywell Mind.* Jul 16.
- Torres G., 2024. The elderly and implications of their biopsychosocial needs for health care in Latin America. *MOJ GerontolGeriatr.* 2017 2:00123.
- World Health Organization. 2022. Ageing and health Oct 1.
- World Health Organization. 2022. Ageing and health [Internet]. Geneva: World Health Organization.
- Reema R.M, B. Thomas and S. Lobo., 2019. Health problems in geriatric population of age group 70 years in rural Kerala, India: a cross-sectional study. *Int J Community Med Public Health.* 6:4016-4020.

7. Raj R., k. Sreekala, K.E. Baby and k.k. Pappachan., 2019. Health problems in geriatric population of age group 70 years in rural Kerala, India: A cross-sectional study. *International Journal of Community Medicine and Public Health*. 6:3895-900.
8. Nayak R., A. Sreedevi and S. Prasad. 2022. A comparative study on quality of life of elderly among those living with families and in old age homes in a District in South India [Internet]. ResearchGate.
9. Kuehne LM, M. Padgham, S.A. Gagné, R. Jordan, M. Mengel and J.D. Olden, *et al.*, 2019. Practicality vs. impact in citizen science: Unstructured observations and fieldwork outperform structured surveys for ecological monitoring. *J Appl Res Manag*. 20:125-32.
10. Zhang X, Y. Luo, X. Chen, Y. Shi, M. Peng and L. Zhang, 2022. CirLPAR1 regulates macrophage inflammation and apoptosis via NF- κ B and KLF4 in atherosclerosis. *Front Immunol*. 13:9644428.
11. Qian X, R. Ren, Y. Wang, Y. Guo, J. Fang and X. Wu, *et al.*, 2021. Fighting against the common enemy of COVID-19: a practice of building a community with a shared future for mankind. *BMJ Open*. 11:e041755.
12. International Journal of Creative Research Thoughts (IJCRT), 2022. "Challenges of Sustainable Development in India." *IJCRT*. 10:1-6.
13. Kranzusch PJ, A.S. Lee and J.A. Doudna, 2020. Structure of the CRISPR-associated protein 9 (Cas9) and its recognition of target DNA. *Nat Commun*. 11:1525.
14. Agarwal R, P. Agarwal and A .Garg, 2022. A study on the effect of digital media on academic performance of students. *Int J Creative Res Thoughts*. 10:1747-1754.
15. Mishra A. and V. Tripathi, 2022. A study on the impact of digital marketing on consumer behavior in India. *Int J Creative Res Thoughts*. 10:1235-47.
16. Cresswell J, J. Shiels, A. Fox, M .Elisha, J. Anderson and L. Marsh, *et al.*, 2022. Molybdenum, tungsten and vanadium in the environment: Their effects on plants and animals. *J Contam L M M*. 8:111-125.
17. Zhang J, H. Zhang, X. Wang, J. Zhao and H. Liu, 2024. Improved methods for reducing the energy consumption in industrial processes. *J Chem Lang Mater*. 9:1250-1260.
18. Ranzijn R., 2002. The potential of older adults to enhance community quality of life: Links between positive psychology and productive aging. *Ageing International*. 27:30-55.
19. Srinivasan V, N. Arasappa, S. Natarajan, M. Krishnamurthy, V. Selvaraj, N. Manoharan, 2024. A comparative study on quality of life of elderly among those living with families and in old age homes in a District in South India. [Internet].