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Self-Reported Health and Associated Factors among Nepalese Older Adults

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ABSTRACT

Background: Self-reported health (SRH) is a subjective measurement tool for overall health status that integrates biological, social, mental, and functional aspects of individuals.

Objectives: This article aims to assess the SRH and its correlates among community-living older adults.

Methods: This study is a secondary analysis of structured interview data collected by the Central Department of Population Studies at Tribhuvan University (TU) via a cross-sectional survey of community-dwelling persons aged 60+ in the Pharping area of Kathmandu. For this study, there were 1320 valid responses. A simple and direct question was used "In general, how do you rate your general health?" Its answer was recorded on the 5-point Likert scale ranging from "Very Good to Very Bad".

Results: The mean age of the participants was 69.92 years. Of the participants, 19.2% reported poor SRH. Results show mental health problems, total number of children still alive, age of respondent, literacy status, physical health problem now, satisfaction with current living arrangements, walking efficiency, adequate income sources, marital status and currently working were correlated with SRH. However, linear regression shows that significant factors of SRH are walking efficiency (β= 0.324, 95% CI= 0.240 to 0.323), physical health problems (β = -0.258, 95% CI= -0.493 to -0.346), currently working (β: 0.197, 95% CI=0.223 to 0.373), having enough income to meet basic needs (β: 0.065, 95% CI= -0.136 to -0.021) and satisfied with living arrangements (β= 0.065, 95% CI= 0.018 to 0.116).

Conclusion: Nepal is aging rapidly, and the proportion of older people will increase in the coming days. Walking efficiency, physical health, currently working and having sufficient income are important factors related to SRH. Identifying these determinants through self-rated status can support the planning of actions aimed at improving the health of the community living older adults.

Keywords: Community living elderly, Health Status Indicators, Nepali older people, Self-Reported Health (SRH)

1. Introduction

The demographic shift due to the global population aging presents unique challenges in ensuring the health and well-being of this growing population [1]. Developing countries often face resource constraints, with limited healthcare infrastructure and personnel. This can lead to underdiagnosis and undertreatment of health issues in older adults. Self-reported health (SRH) data provides valuable insights into the health needs and experiences of this population, even in the absence of extensive medical records [2].

SRH refers to an individual's perception of their overall health. SRH was developed by John Ware and Cathy Sherbourne in 1992 to capture how healthy people think they are [3]. SRH goes beyond physical health and also captures how well older adults can perform daily activities. This is particularly important in understanding their overall well-being and their need for support [4]. It is crucial in settings with limited resources for health surveillance [5]. Research shows that SRH is a strong predictor of mortality and future health outcomes in older adults [6]. This allows for early identification of individuals at risk and helps prioritize interventions.

Population aging is taking place rapidly in Nepal [7, 8]. A limited small-scale survey has shown that Nepalese older adults are suffering from different types of chronic diseases [9], depression and anxiety [10], Functional limitations [11, 12] and lower quality of life [13]. Assessing the health status of older people clinically is time-consuming, expensive, and due to limited health facilities and manpower, challenging in the context of Nepal. SRH is an easy measure of overall health and is useful in identifying persons at risk of a decline in health and the risk of disability in older adults. SRH goes beyond physical health and captures how well older adults can perform their activities. This is particularly important in understanding their overall well-being and their need for support [14]. Thus, the purpose of this article is to assess the SRH and its predictors in the context of Nepal.

2. Methods

2.1 Study Area

This study uses secondary from the study area of six Village Development Committees (VDCs) in the Pharping area of Kathmandu, Nepal.

2.2 Study Design

This research is a secondary analysis of cross-sectional data from a survey conducted

by Tribhuvan University's (TU) Central Department of Population Studies (CDPS). AT the time of the study, VDCs were lower-level administrative areas at that time.

2.3 Sample size and sampling

The VDCs in this study were selected as a convenience sample, as they comprise the catchment area of one community hospital in Pharping. Each VDC has nine wards (the lowest-level political unit). This yielded 54 wards, which were considered the Primary Sampling Units (PSUs) for this study.

A list of all households was developed for each ward, with the help of the VDC office and community leaders. Random sampling was applied to each ward's list and continued until the goal of 20 households with at least one-member aged 60+ was reached. This yielded 1,080 households, of which 1,070 (99%) consented to interviews. All persons with aged 60+ years in each household were interviewed. Of the 1,375 older adults in the 1,070 consenting households, 1,355 (98.5%) consented to be interviewed.

2.4 Data Collection

For this study, people who reported a clinical diagnosis of Alzheimer's disease or another dementia were excluded, as were those for whom some demographic data were missing; there were 29 such cases. An additional 6 respondents' information on SRH was missing and thus 1,320 older adults for this study.

Self-rated health was measured based on the question: "How do you rate your general health?" and the answers were "very good", "good", "moderate", "not good", and "very bad". For this analysis, the responses were collapsed into "Good" (very good and good), moderate, and "Poor" (not good, and very bad).

2.5 Data Analysis

Data analysis was performed using the SPSS 26.0 software (SPSS Inc., Chicago, IL, USA). The statistical data analysis included percentage distribution, mean, correlation, and linear regression. First, a linear correlation was calculated to identify the statistically significant factors (significant at $p<0.05$ and $p<0.01$) correlated with SRH. Subsequently, linear regression, a statistical technique was used, to identify which variables have the strongest independent effects on SRH, considering all variables together.

2.6 Ethical Clearance

This study was approved by the Nepal Health Research Council (Ref No. 211, Reg No.

66/2012) and was found to conform to ethical research standards.

3. Results

3.1 General Characteristics of the Respondents

Table 1 summarizes the general characteristics of the study population. The mean age of the respondents is 69.92 (±7.82) years with an age range of 60-99 years. The distribution is nearly even between males and females. The majority of the population is married (51.3%), followed by widowed/widowers (45.1%) and others (3.6%). The average number of surviving children is 3.93 (±1.97).

Most older people live with family members (78.6%), followed by those living with spouses (11.7%), alone (6.1%) and others (3.6%). The majority of the population is satisfied with their living arrangements (82.0%). A higher proportion of the population is working (70.9%), and a lower proportion is literate (30.2%). Only a small proportion reported receiving a pension, and the majority did not respond. Most people report that their income source is just adequate to fulfil their basic needs (63.1%).

A higher proportion of the population has physical health problems (76.4%). Over half of the population (52.5%) reports having mental health problems. Almost half of the population (49.7%) reports having better walking efficiency compared to other people of the same age (Table 1).

Table 1: General characteristics of the respondents (n=1320)

Variables	Number (n)	Percentage (%)
Sex		
Male	656	49.7
Female	664	50.3
Age		69.92 (±7.82)
Marital Status		
Married	677	51.3
Widow/widower	595	45.1
Others	48	3.6
Surviving children till now		3.93 (±1.97)
Literacy Status		
Literate	398	30.2
Illiterate	922	69.8
Living Arrangement		
Family members	1037	78.6
Spouse	154	11.7
Alone	81	6.1
Other	48	3.6
Satisfaction with living arrangements		
Satisfied very much	54	4.1

Variables	Number (n)	Percentage (%)
Satisfied	1080	81.8
Okay	88	6.7
Not Satisfied	78	5.9
Not satisfied very much	20	1.5
Working Status		
Yes	935	70.8
No	385	29.2
Income source adequate to fulfil the basic needs		
Less adequate	392	29.7
Just adequate	831	62.9
More than adequate	97	7.4
Physical Health Problems		
Yes	1009	76.4
No	311	23.6
Mental Health Problems		
Yes	693	52.5
No	627	47.5
Walking efficiency compared to other people of the same age		
Better	655	49.6
Similar	390	29.6
Poor	275	20.8

3.2 Self-reported health (SRH) of the respondents

The Table 2 shows the self-reported health of 1,320 respondents. It indicates 28.8 % reported very good health, 52.0 % reported average health, and 19.2 % reported poor health (Table 2).

Table 2: Self-Reported Health of the respondents (n=1320)

Health Status	Number	Percentage
Very Good	380	28.8
Average	686	52.0
Poor	254	19.2

3.3 Factors Correlated with Self-Rated Health

Factors significantly correlated in Table 3 were selected and used for the linear regression in Table 4. Table 4 uses linear regression, a statistical technique, to identify which variables with the strongest independent effects on SRH, considering all variables together (Table 3).

Walking efficiency has the strongest positive association with SRH (Beta coefficient (β) = 0.324, 95% confidence interval (CI)=0.240 to 0.323). People with better walking efficiency tend to report better self-rated health.

Table 3: Factors Correlated with Self-Rated Health

Variables	Pearson correlation coefficient	95% Confidence Interval	
		Lower Bound	Upper Bound
Sex	.096(**)	0.058	0.205
Age	.186(**)	0.012	0.021
Marital Status	.074(*)	0.024	0.154
Total no. of children still alive	-.029	-0.029	0.009
Literacy Status	.108(**)	0.042	0.282
Living arrangement	.006	-0.044	0.055
Satisfied with current living arrangements	.138(**)	0.087	0.198
Currently working	.354(**)	0.459	0.612
Income sources adequate to fulfil basic needs	-.154(**)	-0.252	-0.122
Walking efficiency	.478(**)	0.374	0.456
Physical health problems	-.383(**)	-0.700	-0.539
Mental health problems	-.206(**)	-0.356	-0.211

**Significant at .001 *Significant at .005

3.4 Linear Regression of Self-Reported Health

Similarly, physical health problems have the strongest negative association with SRH (Beta coefficient (β) = -0.258, 95% CI: -0.493 to -0.346). Having a physical health problem is linked to poorer self-rated health. People who are currently working report better self-rated health (β coefficient: 0.197). Having enough income to meet basic needs is associated with better SRH (β positive coefficient = 0.065, 95% CI: -0.136 to -0.021). Further satisfied with current living arrangement is positively associated with SRH (β positive coefficient = 0.065, 95% CI: 0.018 to 0.116). Marital status has an unclear impact on SRH (β weak negative coefficient= -0.025). The R-squared value (0.359) indicates that the model explains about 36% of the variance in SRH (Table 4).

Table 4: Linear regression showing the significant variables of SRH

Variables	Standardized Coefficients		95% Confidence Interval	
	Beta	Sig.	Lower Bound	Upper Bound
Constant		.000	1.161	1.893
Age of respondent	0.010	0.688	-0.003	0.005
Sex of the respondents	0.032	0.223	-0.027	0.115
Marital Status	-0.025	0.301	-0.087	0.027
Satisfied with current living arrangements	0.065	0.007	0.018	0.116
Can read & write in any language	.020	0.448	-0.048	0.108
Currently working	.197	.000	0.223	0.373
Income sources adequate to fulfil basic needs	-.078	.008	-0.136	-0.021

Variables	Standardized Coefficients		95% Confidence Interval	
	Beta	Sig.	Lower Bound	Upper Bound
Walking efficiency	.324	.000	0.240	0.323
Physical health problem now	-.258	.000	-0.493	-0.346
Mental health problem	-.055	.020	-0.140	-0.012
Model Summary	R	R Square	Adjusted R Square	R Square Change
	.559a	.359	.354	.559

[a]Predictors: (Constant), Physical health problem now, Marital status, Income sources adequate to fulfil basic needs, currently working,
Sex of respondent, Mental health problem, satisfied with current living arrangements, Walking efficiency, Age of respondent, Can read & write in any languages

4. Discussion

In recognition of increasing worldwide concern for issues of the elderly, SRH has been recognized as an important public health issue, predicting, among other things, low quality of life among older adults. Self-reported health (SRH) is a powerful and widely employed indicator of overall health status in older adults. It reflects an individual's perception of their physical, mental, and social well-being, capturing aspects not always identified by traditional clinical measures. The primary purpose of the present study was to examine the situation of SRH and the significantly related variables in the community living Nepalese older adults.

This study shows that 28.8% of people reported good health, 52.0% reported average health, and 19.2% reported poor health status. The prevalence of poor SRH was 19.2%. This finding is consistent with the Korean study (19.9%) [15]. Another Korean study shows that 44.2% of subjects reported poor SRH [16]. The latest study shows the prevalence of poor self-rated health (SRH) among Malaysia's older population was found to be 32.6% [17]. This difference in prevalence in different countries may be attributed to various factors, such as the study population's demographic characteristics, including age, gender, and ethnic group, and the methodology used, such as the type of rating scale and the wording of response categories. Additionally, the differences in health status among older persons may be influenced by cultural, geographical, socioeconomic, and sociopolitical factors. These factors can affect an individual's perception of their health, and, therefore, may contribute to differences in SRH prevalence across different countries.

Past study shows those with limited financial resources tend to report poorer health [18,

19]. In other words, those who have adequate financial resources have good health. The findings of this study also show, having adequate income resources reported better health. It is also supported by an Indian study [20]. Further, older economically dependent adults had a higher risk of having poor SRH [21, 22].

This study shows older people who reported walking efficiency compared to others of same age have better SRH. The ability to perform activities of daily living (ADLs) like bathing, dressing, and eating is closely linked to SRH. The decline in functional independence can lead to the feelings of helplessness and negatively impact overall health perception. [18, 23] Having limitations in carrying out activities of daily living (ADLs) is an important factor that is linked to lower self-rated health among older persons in Malaysia, as well as in other countries [4, 15-17].

Morbidity is a strong predictor of poor SRH among older adults in India [24]. Our findings also show respondents suffering from physical health and mental health have poorer SRH. Other studies also show similar results. [19, 20] Depression, anxiety, and loneliness are significant factors associated with poorer SRH in older adults. Mental health issues can influence physical health and vice versa, creating a complex interplay [25] .

Further findings from this study show that satisfaction with current living arrangements is an important predictor of SRH. People living with family members reported better SRH. The majority of older adults in this study were found to live with family members[26], which may explain why only 20% of older people reported poor health Additionally, staying busy with work is another important predictor of better SRH. Although most older adults reported working, it was often in the informal sector. Studies from other countries also show that those who are employed report better SRH [19, 20]. Voluntary work is an important indicator of healthy and active aging and supports achieving higher quality of life [27, 28].

The results of this study must be interpreted within the context of its limitations. Among these, the cross-sectional methodological design stands out, which does not allow for causal or temporal inferences about the associations found. In addition, some measures were based on self-report and therefore may be subject to recall bias, diagnostic suspicion, and socially desirable

responses. However, it is noteworthy that this is a population-based study with an assessment of aspects related to health that is unprecedented for the target population involved.

5. Conclusion

This study shows 19.2% older people reported their SRH poor, 52.0% reported average and 28.8% reported good. Factors associated with SRH were currently working, physical health, mental health, satisfaction with living arrangements, adequate income, and self-perceived walking efficiency compared to other people of the same age. Local communities and stakeholders, including local government, need to focus on initiatives to create healthy aging environments.

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