RESEARCH ARTICLE

Socio-demographic Correlates of Psychological Well-being among Older Adults in Bhutan

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Abstract: Well-being is a complex combination of physical, psychological, emotional, and social health factors of a person. The feeling of well-being is essential for the overall health of a person and enables them to be successful and achieve what they want in life. There is a paucity of study on the well-being of older adults in Bhutan. This study attempted to assess how older adults in Bhutan perceive their well-being and determine their socio-demographic correlates. The World Health Organization five well-being indexes were applied to measure well-being. Findings indicated above average well-being score with the nature of the relationship with children, education level, and employment status as independent correlates. Efforts to enhance the relationship between family members could be more relevant for the well-being of older adults. Further research on well-being is required to incorporate determinants other than socio-demographic variables.

Keywords: Well-being; Older adults; Bhutan

1. Introduction

1.1. Text

Since the introduction of planned socio-economic development in Bhutan, the health outcomes of the Bhutanese people improved tremendously with an increase in the life expectancy to 70.2 years in 2017[1] from a mere 32.4 years in 1960[2]. As of 2017, the older population (≥60 years) in Bhutan is at 8.67%[1]. Evidence asserts improved health, reduction in the premature death and fertility rates, increase in the life expectancy, attributed to the rapid aging population, including Bhutan. With an increase in the aging population, the measurement of psychological well-being has become an important facet to assess successful aging. In the face of rapid socio-economic development and modernization, and within the Bhutanese context, population aging disparities could be attributed to cohort differences such as the opportunity to attend modern and traditional education which were limited before 1960s, and their influence on the subjective well-being (SWB) of older adults is worth exploring in this study.

SWB is influenced by many factors, such as age, gender, marital status, education, occupation and income, religion and spirituality, and health, and among others[3,4]. Existing literature on well-being reported U-shaped association between age and well-being[5] although a number of studies support the negative linear relationship between age and well-being[3,6,7]. In general, low well-being is reported more among female gender[8,9] mainly due to disadvantages in income,

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socio-economic status, and social relationship[10]. Udayar and Prasad[8] believe females are generally the neglected part of the society, especially in their advancing age regardless of their invaluable service in the family, which could influence self-report of low SWB correlates such as low education and income negatively influence SWB[3,7]. On the other hand, compared to older adults who lost their life partners to death and divorce, well-being score was reported higher among those currently living with their spouse[3,6].

Better socio-economic status is a significant correlate of well-being[10]. Having an average monthly income favored a positive outlook of life, and education contributed greatly toward income ensuring better health at an advanced age. Better financial status also favored greater autonomy in the choice of leisure activities, increased access to goods, services, and relationships[11] worth studying in the context of Bhutan.

Empirically, more Bhutanese, especially the young, are observed migrating to urban centers looking for better economic futures. Older adults who are mostly left in the rural villages often to fend for themselves are prone toward increasingly facing the phenomenon of "empty-nest" meaning older adults living alone whose children left home[3]. Such transition would cause loneliness influencing the higher odds of reporting low SWB[9], increase the feeling of worthlessness[8], and invite hosts of physical and mental health conditions. Living with children, grandchildren, their support, social, and family relationships are imperative for the SWB[3,12,13] and perception of successful aging among older adults[14]. In addition, how and where older adults live can influence their well-being for which the conduct of this study to assess the influence of socio-demographic variables on the well-being of older adults in Bhutan is merited.

2. Methodology

2.1. Study design

This study was a cross-sectional design aimed to find socio-demographic correlates of well-being among older adults in Bhutan.

2.2. Sample estimation and sampling techniques

The estimation of the sample size for this study was based on the number of variables included in this study. With the inclusion of 25 variables in this study, the sample was estimated to be 330 considering 30% dropout rates. In the process of data collection, seven more participants were included. Finally, the survey was completed at 337. Convenient sampling technique was applied and data were collected from the four major commercial towns (Thimphu, Phuntsholing, Gelephu, and Samdrup jongkhar) of Bhutan. Participants were conveniently contacted at the religious and public recreational sites. Since no older adults approached declined to participate, the response rate was 100%.

2.3. Instrumentation

The World Health Organization well-being index (WHO-5 wellbeing index) was applied to assess psychological well-being. WHO-5 well-being index consists of five simple questions, which taps the SWB of the respondents in the past 2 weeks. The scale had adequate validity and has been successfully applied in a wide range of disciplines[15]. The five statement of the WHO-5 well-being index have a total raw score ranging from 0 to 25, which is multiplied by four to get the final score range of 0-100. Zero represents the worst imaginable well-being, while 100 represents the best imaginable well-being. The instrument was pre-tested and a satisfactory internal consistency was achieved (Cronbach's α=0.96).

2.4. Data collection techniques

Data were collected through a face-to-face interview by trained research assistants (RAs) using a structured questionnaire between November 2014 and January 2015. Data from the participants were collected using four languages (Dzongkha, Tsanglakha, Lhotsamkha, and English) in which the principal researcher and the RAs were well versed. Before each interview, potential participants were briefed on the aims and objectives of the study. No incentives were provided before the interview. However, each participant was remunerated with a small amount as a show of gesture and appreciation for their participation in this study after the interview.

2.5. Data analysis

Data collected were entered with the help of EpiData version 3.1. It was then transferred to Statistical Package for the Social Sciences (SPSS) version 21 for windows. Counts, percentage, and mean and standard deviation (SD) were used to describe the data. Independent t-test, one-way ANOVA followed by multiple comparisons (with Tukey's *post hoc* test), and multiple linear regression was applied to find the associations between the variables.

3. Ethical Consideration

Permission to conduct this study was granted by the Research Ethics Board of Health (REBH), Ministry of Health, Bhutan (REBH/Approval/2011/013-Protocol Amendment).

4. Results

A total of 337 Bhutanese older adults comprising 56.1% (*n*=189) men and 43.9% (*n*=148) women participated in this study (Table 1). Participants ages ranged between 60 and 101 years (M=71.5, SD=7.66). About 54.9% of the participants

Table 1. Socio-demographic characteristics of the sample by gender

Socio-demographic characteristics	Male	Female	Total	*P*-value
	n (%)	*n* (%)	*n* (%)	
Age (Mean±SD: 71.51±7.66)				0.360
60-69 years	74 (39.2)	69 (46.6)	143 (42.4)	
70-79 years	77 (40.7)	55 (37.2)	132 (39.2)	
≥80 years	38 (20.1)	24 (16.2)	62 (18.4)	
Marital status				0.006**
Married	114 (60.3)	65 (43.9)	179 (53.1)	
Not married	15 (7.9)	11 (7.4)	26 (7.8)	
Widowed	60 (31.7)	72 (48.6)	132 (39.2)	
Relationships with children (n=331)				0.207
Very good	147 (79.0)	106 (73.1)	253 (76.4)	
Not so good	39 (21.0)	39 (26.9)	78 (23.6)	
Most of the childhood days spent				0.000***
Village	156 (82.5)	142 (95.9)	298 (88.4)	
Not in village	33 (17.5)	6 (4.1)	39 (11.6)	
Education level				0.000***
No formal schooling	142 (75.1)	143 (96.6)	285 (84.6)	
Some form of schooling	47 (24.9)	5 (3.4)	52 (15.4)	
Languages spoken				0.000***
Speak at least one of four languages	83 (43.9)	105 (70.9)	188 (55.8)	
Speak at least two of four languages	59 (31.2)	28 (18.9)	87 (25.8)	
Speak three to all of the four languages	47 (24.9)	15 (10.1)	62 (18.4)	
Work status in the past 12 months				0.129
Employed	91 (48.1)	64 (43.2)	155 (46.0)	
Home maker	22 (11.6)	29 (19.6)	51 (15.1)	
Unemployed	76 (40.2)	55 (37.2)	131 (38.9)	
Total household members				0.349
1-5 family members living together	108 (57.1)	77 (52.0)	185 (54.9)	
≥6 family members living together	81 (42.9)	71 (48.0)	152 (45.1)	

**P<0.01; ***P<0.001. *n*: Number of participants, SD: Standard deviation

mentioned currently living together with their children and approximately three quarters (76.4%) acknowledged having a very good relationship with their children. Most (88.4%) of the participants mentioned having spent most of their childhood days in rural villages. Approximately 84.6% of the participants had no formal education. Nearly half (46%) of the participants were currently employed. The detail distribution of the socio-demographic characteristics of the participants can be viewed in the earlier published article[16].

4.1. Distribution of the WHO-5-wellbeing index items by gender

As displayed in Table 2, the average score of the wellbeing was 57.90 (SD=18.34) and was significantly different between the genders (P<0.001). The feelings of being cheerful and in good spirits, calm and relaxed, fresh and rested, and of having a daily life filled with things of interest in the past 2 weeks were also significantly different between the genders (P<0.01). Men reported better well-being in each of the items (i.e., considering more than half of the time to all of the time). Further independent t-testing confirmed that the overall and individual well-being index scores were significantly greater among older men (M=61.71, SD=17.42) compared to the older women (M=53.03, SD=18.38).

4.2. Relationship between demographic characteristics and well-being

As illustrated in Table 3, a wide range of socio-demographic characteristics was significantly correlated with well-being. A statistically significant relationship was established between marital status and well-being (P<0.05). *Post hoc* testing with Tukey's honestly significant difference (HSD) determined significant difference in the mean scores at different levels of marital status. A higher well-being means score was reported among married participants (M=60.13, SD=18.18) compared to never married or widowed. While well-being was found to have no link with a total number of living children, well-being was significantly related to the total number of family members living together (P<0.05) and perceived relationship with children (P<0.001). Older participants who perceived better relationships with their children and lived together with no more than five family members reported better well-being.

Well-being was significantly associated with most of the childhood days spent in rural/urban settings (P<0.01) and the level of education (P<0.001). Higher well-being score was reported among older adults who spent most of the childhood days in urban areas and attended some form of formal schooling.

Ability to speak multiple languages was associated with psychological well-being (P<0.01). Likewise, a significant relationship was observed between well-being and employment status (P<0.01). Tukey's HSD and Games-Howell *post hoc* tests revealed significant differences in the mean scores of well-being at different levels of language proficiency and the current work status. Older participants who spoke three to four languages and currently employed reported better well-being than those who spoke one or two languages and currently unemployed, respectively.

4.3. Independent socio-demographic correlates of well-being

To determine the independent correlates of psychological well-being, multiple linear regression was performed. The model specification was based on the results of the bivariate analysis in Table 3. The final model contained three significant independent correlates, namely, nature of relationship with children, level of education, and employment status after controlling for gender. Table 4 presents a summary of the multiple regression analysis of psychological wellbeing. The final model as a whole accounted for 13% of the variance in the psychological well-being, R^2=0.02, adjusted R^2=0.13, F (4.326)=13.43, P<0.001. The nature of the relationship with children recorded the highest beta value (β=0.18, P<0.01) indicating for every unit of increase in the relationship with children, the well-being score increases by 0.18.

5. Discussion

This study investigated psychological well-being and its socio-demographic correlates. The overall mean well-being score was little above average inclining toward better well-being.

Low SBW was reported more among older women and those living alone due to loss of life partners or divorce. Similar findings were observed in the previous studies[3,6,8]. High prevalence of widowhood with no formal schooling,

Table 2. Distribution of the WHO-5 well-being index items by gender

WHO 5 well-being index	Male	Female	*P*-value
	n (%)	*n* (%)	
I have felt cheerful and in good spirit			0.009**
All of the time	11 (5.8)	4 (2.7)	
Most of the time	68 (36.0)	34 (23.0)	
More than half of the time	55 (29.1)	41 (27.7)	
Less than half of the time	38 (20.1)	46 (31.1)	
Some of the time	17 (9.0)	23 (15.5)	
At no time	0	0	
Mean (SD) (scale=0-5)	3.10 (1.07)	2.66 (1.08)	0.000***
I have felt calm and relaxed			0.006**
All of the time	9 (4.8)	4 (2.7)	
Most of the time	69 (36.5)	32 (21.6)	
More than half of the time	32 (16.9)	22 (14.9)	
Less than half of the time	60 (31.7)	62 (41.9)	
Some of the time	19 (10.1)	28 (18.9)	
At no time	0	0	
Mean (SD) (scale=0-5)	2.94 (1.13)	2.47 (1.11)	0.000***
I have felt active and vigorous			0.1
All of the time	7 (3.7)	6 (4.1)	
Most of the time	75 (39.7)	48 (32.4)	
More than half of the time	54 (28.6)	32 (21.6)	
Less than half of the time	22 (11.6)	29 (19.6)	
Some of the time	31 (16.4)	33 (22.3)	
At no time	0	0	
Mean (SD) (scale=0-5)	3.03 (1.15)	2.76 (1.11)	
I woke up feeling fresh and rested			0.001**
All of the time	21 (11.1)	6 (4.1)	
Most of the time	65 (34.4)	33 (22.3)	
More than half of the time	46 (24.3)	33 (22.3)	
Less than half of the time	40 (21.2)	51 (34.5)	
Some of the time	17 (9.0)	25 (16.9)	
At no time	0	0	
Mean (SD) (scale=0-5)	3.17 (1.16)	2.62 (1.13)	0.000***
My daily life has been filled with things that			0.001**
Interest me	9 (4.8)	4 (2.7)	
All of the time	87 (46.0)	37 (25.0)	
Most of the time	41 (21.7)	48 (32.4)	
More than half of the time	35 (18.5)	34 (23.0)	
Less than half of the time	17 (9.0)	25 (16.9)	
Some of the time	0	0	
At no time			
Mean (SD) (scale=0-5)	3.14 (1.08)	2.74 (1.10)	0.000***
Overall well-being (0-100)			0.000***
Mean (SD)	61.71 (17.42)	53.03 (18.38)	

n: Number of participants, WHO: World Health Organization, **$P<0.01$; ***$P<0.001$; $^{\delta}P$-value by Welch F statistics. Scale range is 0-5. 0: At no time, 1: Some of the time, 2: Less than half of the time, 3: More than half of the time, 4: Most of the time, 5: All of the time. Total wellbeing score ranges in between 5 and 25. SD: Standard deviation

Table 3. Association between socio-demographic characteristics and well-being

Demographic characteristics	Sample size	Well-being	*P*-value
		Mean (SD)	
Age of the participants			0.203
60-69 years	143	59.19 (17.21)	
70-79 years	132	58.21 (19.37)	
≥80 years	62	54.26 (18.42)	
Gender			0.000***
Male	189	61.71 (17.42)	
Female	148	53.03 (18.38)	
Marital status			0.036*
[a]Married	179	60.13 (18.18)	
[b]Never married	26	56 (18.15)[a]	
Widowed	132	52.15 (18.68)[ab]	
Total number of children alive			0.947
≤3 children	116	58.28 (19.46)	
4-5 children	116	57.52 (15.49)	
> 5 children	105	57.9 (20.04)	
Relationships with children (*n*=331)			0.000***
Very good	253	60 (18.58)	
Not so good	78	50.87 (15.42)	
Religion			0.68
Buddhist	304	57.76 (18.28)	
Non-Buddhist	33	59.15 (19.1)	
Place most of the childhood days spent			0.001**
Village	298	56.68 (17.93)	
Not in village	39	67.18 (18.99)	
Level of education			0.000***
No formal schooling	285	55.9 (17.23)	
Some form of schooling	52	68.85 (20.43)	
Language spoken			0.006**
[a]Speak 1 of 4 languages	188	56.09 (17.96)	
[b]Speak 2 of 4 languages	87	57.1 (18.93)	
Speak 3-4 languages	62	64.52 (17.39)[ab]	
Employment status			0.003**

*P<0.05, **P<0.01, ***P<0.001, Languages: (1) Dzongkha, (2) Lhotshamkha, (3) English, and (4) Tshanglalo, [ab]*Post hoc* tests with Tukey's HSD and Games-Howell at significance level of 0.05. SD: Standard deviation, HSD: Honestly significant difference

especially among older women in this study may have contributed to low self-report of well-being. Widowhood may have also influenced the feelings of being cheerful and in good spirits, calm and relaxed, fresh and rested, and having a daily life filled with things of interest in the past 2 weeks, which were significantly recorded low among the older women participants. Existing evidence supports that widowhood might cause loneliness impairing well-being[17]. The promotion of social relationship and cohesion could be beneficial as it may act as a buffer against the adverse effects of being lonely, and help provide affective support to enhance self-esteem and mutual respect to improve their well-being[4].

Education level and current employment status were found to be independent correlates of well-being. Lifelong education and better socio-economic status are believed to promote the experience of greater well-being[10,18]. Amenities

Table 4. Multiple regression analysis predicting well-being (n=337)

Independent correlates	B	SEB	β	*t*-value	95%CI	*P*-value	VIF
Gender	−6.286	1.977	−0.171	−3.179	−10.176-−2.397	0.002**	1.098
Relationship with children	7.609	2.221	0.177	3.426	3.240-11.979	0.001**	1.013
Education level	8.169	2.738	0.162	2.984	2.783-13.555	0.003**	1.114
Employment status	−1.834	1.028	−0.143	−2.757	−4.857-−0.811	0.006**	1.021
Constant	49.499	6.801		7.278	36.119-62.879	0.000***	

Final model 4: F (4. 326)=13.43, R^2 change=0.02, and adjusted R^2=0.13, **P<0.01, ***P<0.001. B: Unstandardized regression coefficient, SEB: Standard error of the coefficient, β: Standard coefficient. VIF: Variance inflation factors, CI: Confidence interval

to enhance lifelong education and opportunity for employment to earn money for survival needs are essential for an older adult[19].

SWB was found to be correlated with having spent most of the childhood days in urban communities, and the ability to speak multiple languages which are not reported in other international literature. Unlike being in the communities of rural villages, urban areas may offer readily available facilities such as the accessibility to advance health facilities could influence self-report of higher well-being. Besides, religious sites and monument within the urban areas where older adults generally come to interact have the higher probability of engaging into social activities (such as community events, elderly club, and religious activities) considered important for both the rural and urban dwellers[20]. Such engagements might offer an opportunity to strengthen their communication and linguistic skills that could also influence the self-report of higher well-being. Existing evidence supports that linguistic factor affects the development of literacy skills[21] and maintenance of higher levels of cognitive functioning since knowing multiple languages are likely to enrich one's experience of accessing to other cultural ideas[22]. The positive influence of multiple language proficiency on well-being deserves further exploration.

Perceived poor relationship with children was found to be an independent correlate of low SWB. This finding was consistent with study in China[12]. Although relationships with family members could enhance or be detrimental to well-being[13], most study support better relationships with family and friend and their support make unique contributions to the well-being of older adults.

This study has its own share of limitations. Most importantly, the study design being cross-sectional seriously hampered the ability to capture parent-children relationship dynamics and draw causal inferences. It is not possible to determine the direction of the relationship using our study findings. However, a finding on the established significant associations prompts the need for further study in the future to identify the directionality.

6. Conflict of Interest

No conflict of interest was reported by the authors.

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