Study on health-related quality of life perception among Nepalese

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ABSTRACT

Perception about the health status of an individual is important for the quality of life (QOL) and day-to-day productive functioning. Present study was carried out on the perception status QOL of Nepalese (aged 10 to 80 years) using SF-36v2™ questionnaire. A total of 788 Nepalese (322; 40.9% were males and 466; 59.1% were females) living in Kathmandu Valley were included. More than half were *Bahun/Chhetri* (*Hindu* upper caste people) (n=437; 55.5%) followed by *Adibashi Janajati* (Indigenous nationalities) and *Dalits* (*Hindu* lower caste people). Males had significantly higher scores for physical functioning (t=5.277, df=780, p=0.00), bodily pain (t=2.811, df=780, p=0.05) and vitality (t=3.78, df=780, p=0.00) but not with regard to mental health (t=1.43, df=780, p=0.153). This was true for all age groups. No significant difference was observed in role physical, general health, social functioning and role emotional. *Dalits* had significantly low score regarding physical functioning compared with *Bahun/Chhetri* and *Adibashi Janajati* (f=9.005, P=0.000). However, they had positive perceptions regarding the general health (f=8.408, P=0.000) and social functioning (f=13.216, P=0.000). Genderwise difference was observed in physical, mental and social perception and activities compared with their male counterparts, and were found to be significantly decreasing with the increase of age (p=0.05-0.00). These findings suggested that there are significant differences in the perceptions of different groups of people in Nepal.

Keywords: Perception, health, quality of life, Nepal.

INTRODUCTION

Perception of an individual about the health status is very important for the quality of life and day-to-day productive functioning. People of both the genders[1] and social group (ethnic, caste, religious and others) have equal and significant role in productive functioning. However, there are various types of social and other disparity and discrimination (some form of exclusion or rejection) in most of the countries across the world[1-8] contributing significantly in the perception of QOL. Even in the developed country like USA, women are paid significantly less than men for similar work, in Saudi Arabia men are allowed to drive cars while women are not, and in most of the world, women do more housework than men.[1] This has attributed in the significant difference in the perception about the QOL among two genders.

Disparities in social, educational, economic, ethnic, rural-urban, and gender including perception of health status, are common in developing countries and have been hampering in the developmental process.[9] Nepal is one of the least developed countries (ranks 142nd according to human development index; HDI)[10] and disparities and discrimination of all types are rampant.[3,6,7,9-15] It is attributed mainly to political, social and economic discrimination from the state and also to diversified ethnicity, illiteracy rate, poverty, cultural practices, religious belief of the people living in diversified geo-topography, plain area in the south to rugged hills, mountains including *Himalaya* in the north.[11,13] Nepalese society value male child more,[16] though the scenario during recent days has shown some change in people's belief and perception. Sex trafficking of girls and women is widespread and is recognized as gender-based crime, human rights violation and related health consequences prominent being sexually transmitted infection.[7,17,18]

As the disparities and discrimination bring the differences in the perception about the QOL of people that in turn affects the day-to-day productive functioning, it is important to know their status of perception about QOL. In this paper, we report the perception status about the QOL of Nepalese measured by SF-36v2™ [with eight domains of health: physical functioning, role limitations due to physical health (role-physical), bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems (role-emotional) and mental health][19]survey in Kathmandu Valley.

MATERIAL AND METHODS

Study area and population: Questionnaire on SF-36v2™ perception parameters[19] was conducted in Kathmandu

Table-1: Level of SF-36v2™ perception parameters in two different sex (n=788)

Parameter	Sex	n	Mean	SD	t-value	p-value
Physical functioning	Male Female	322 466	80.22 75.26	14.15 11.01	5.277	.000
Role physical	Male Female	322 466	85.99 86.33	26.78 12.65	-.239	.811
Bodily pain	Male Female	322 466	80.97 75.64	27.05 25.50	2.811	.005
General health Perceptions	Male Female	322 466	67.16 66.71	17.91 17.96	.348	.728
Vitality (Vigour)	Male Female	322 466	63.37 58.61	16.73 17.81	3.783	.000
Social functioning	Male Female	322 466	83.00 82.42	7.27 6.91	1.137	.256
Role emotional	Male Female	322 466	73.07 71.90	14.16 13.84	1.154	.249
Mental health	Male Female	322 466	84.83 82.90	19.46 17.98	1.429	.153

Valley – the capital city of Nepal. A total of 900 participants were enrolled in the study. However, only 788 (322 males and 466 females aged 10 to over 80 years) who returned the completely filled questionnaires were included in this study.

Questionnaire: A questionnaire developed according to SF-36v2™ perception parameters[19] about health status (a 36-item short-form survey that measures general health status) measuring eight domains of health, namely, (1) Physical functioning, (2) Role limitations due to physical

Table-2: SF-36v2™ perception parameters in different ethnic groups

Parameter	Ethnic	n	Mean	SD	f-value	p-value
Physical functioning	Bahun/Chhetri[1]) Adibashi Janajati[1)2]) Dalit[2])	326 437 25	75.33 78.96 73.58	10.77 13.43 16.00	9.005	.000
Role physical	Bahun/Chhetri Adibashi Janajati Dalit	326 437 25	86.62 86.12 81.65	13.71 23.18 18.81	.745	.475
Bodily pain	Bahun/Chhetri Adibashi Janajati Dalit	326 437 25	79.26 77.06 72.19	26.78 26.13 26.78	1.250	.287
General health	Bahun/Chhetri[1) 2]) Adibashi Janajati i[1]) Dalit[2])	326 437 25	69.48 64.62 72.80	17.35 18.26 13.55	8.408	.000
Vitality (Vigour)	Bahun/Chhetri Adibashi Janajati Dalit	326 437 25	62.38 59.19 60.60	16.94 17.84 17.99	3.110	.045
Social functioning	Bahun/Chhetri[1) 2]) Adibashi Janajati i[1]) Dalit[2])	326 437 25	83.96 81.53 85.28	4.16 8.57 3.40	13.216	.000
Role emotional	Bahun/Chhetri Adibashi Janajati Dalit	326 437 25	73.12 71.56 76.90	14.15 13.62 16.71	2.524	0.81
Mental health	Bahun/Chhetri Adibashi Janajati Dalit	326 437 25	84.95 82.92 80.44	17.81 19.69 20.17	1.500	.224

*Among the Adibashi Janajati over one-forth were Newars followed by Magar/Gurung and Rai/Limbus

Table-3. SF-36v2™ perception parameters in four different age-groups (n=788)

Parameter	Age-group (Yrs)	n	Mean	SD	f-value	p-value
Physical functioning	- 20 21 - 30 31 - 40 40 +	159 210 156 263	77.76 77.45 77.30 76.87	10.17 14.38 12.17 12.76	0.182	0.908
Role physical	- 20 21 - 30 31 - 40 40 +	159 210 156 263	88.70 88.43 87.01 88.43	13.50 31.29 12.22 11.81	0.154	0.920
Bodily pain	- 20[1)] 21 - 30 31 - 40 40 +[1)]	159 210 156 263	81.67 79.10 78.92 73.82	23.314 23.188 25.691 29.945	3.460	0.016
General health Perceptions	- 20[1)] 21 - 30[2)] 31 - 40[3)] 40 +[1) 2) 3)]	159 210 156 263	70.82 67.52 69.94 62.21	16.49 17.13 17.74 18.55	1.543	0.000
Vitality (Vigour)	- 20[1)] 21 - 30 31 - 40 40 +[1)]	159 210 156 263	64.62 59.93 59.90 58.97	18.92 16.83 17.85 16.70	3.770	0.011
Social functioning	- 20 21 - 30[1)] 31 - 40[2)] 40 +[1)2)]	159 210 156 263	82.65 81.41 81.58 84.29	6.77 9.37 8.61 1.90	8.299	0.000
Role emotional	- 20[1)2)3)] 21 - 30[1)] 31 - 40[2)] 40 +[3)]	159 210 156 263	81.90 69.05 67.95 60.45	12.65 21.10 17.45 14.98	53.44	0.000
Mental health	- 20 21 - 30 31 - 40 40 +	159 210 156 263	84.06 83.78 86.01 82.01	18.64 18.93 18.21 18.52	1.549	0.201

health (role-physical), (3) Bodily pain, (4) General health perceptions, (5) Vitality, (6) Social functioning, (7) Role limitations due to emotional problems (role-emotional) and (8) Mental health was administered to the participants. The original tools were translated into Nepali language and questionnaire was done by local people trained in Kathmandu. After questionnaire, the tools were back translated into English version.

Data analysis: The information obtained was segregated according to sexes, age-groups and ethnics as shown elsewhere. Data were analyzed using SPSS15.0j software and independent T-tests, one-way analysis of variance (ANOVA) followed by the Tukey's multiple comparison test.

RESULTS

Of the total 788 participants, 322 (40.9%) were males and 466 (59.1%) were females. Ethnicwise, more than half were *Bahun/Chhetri* (*Hindu* upper caste people) (n=437; 55.5%) followed by other ethnics. Males had significantly higher scores for four subscale, namely, physical functioning (t=5.277, df=780, p=0.00), bodily pain (t=2.811, df=780, p=0.05), and vitality (vigor) (t=3.78, df=780, p=0.00) but not with regard to mental health (t=1.43, df=780, p=0.153) (Table-1). This was true for all age groups of the participants included. No significant difference was observed in role physical, general health perceptions, social functioning, and role emotional.

Dalits (*Hindu* lower caste untouchable people) had significantly low score regarding physical functioning compared with *Bahun/Chhetri* and *Adibashi Janajati* (indigenous nationalities) (f=9.005, P=0.000). However, they had positive perceptions regarding the general health (f=8.408, P=0.000) and social functioning (f=13.216, P=0.000) (Table-2). Genderwise difference

Table-4: SF-36v2™ perception parameters in two different sexes in the age-group of <20 years (n=159)

Parameters	**Sex**	**n**	**Mean**	**SD**	**t-value**	**p-value**
Physical functioning	Male Female	63 96	79.36 76.72	10.74 9.70	1.61	0.11
Role functioning	Male Female	63 96	73.30 82.25	11.11 13.80	-4.31	0.00
Bodily pain	Male Female	63 96	81.90 81.51	24.57 22.58	0.10	0.92
General health	Male Female	63 96	69.84 71.46	18.88 14.78	-0.60	0.47
Vitality (Vigour)	Male Female	63 96	64.05 65.00	20.00 18.28	-0.32	0.76
Social functioning	Male Female	63 96	84.06 81.73	6.48 6.82	2.18	0.03
Role emotional	Male Female	63 96	86.27 82.61	18.77 18.51	2.37	0.22
Mental health	Male Female	63 96	79.36 76.72	10.74 9.70	1.21	0.23

was observed in physical, mental and social perception and activities compared with their male counterparts, and were found to be significantly decreasing with the increase of age (p=0.05-0.00) (Table-3-6). These findings suggested that there are significant differences in the perceptions about the health related QOL among different populations and genders in Nepal.

DISCUSSION

There are various types disparities in most of the countries across the world (WHO-1) and have attributed to the perception about the health status and QOL of individuals of both the genders. The perception of an individual about the health status is very important for the quality of life and day-to-day productivity. However,

Table-5: SF-36v2™ parameters in two different sexes in the age-group of 21-30 years (n=210).

Parameters	Sex	n	Mean	SD	t-value	p-value
Physical functioning	Male	63	81.22	19.44	2.52	0.012
	Female	147	75.83	11.27		
Role physical	Male	63	93.63	54.14	1.08	0.28
	Female	147	86.20	11.84		
Bodily pain	Male	63	84.91	21.62	2.40	0.017
	Female	147	76.61	23.46		
General health						
perceptions	Male	63	66.35	15.66	-0.65	0.52
	Female	147	68.03	17.75		
Vitality (Vigour)	Male	63	62.70	16.77	1.95	0.05
	Female	147	58.74	16.78		
Social functioning	Male	63	80.73	10.90	-0.69	0.49
	Female	147	81.70	8.66		
Role emotional	Male	63	69.0	21.3	-0.01	1.00
	Female	147	69.1	20.9		
Mental health	Male	63	82.62	24.13	2.53	0.02
	Female	147	84.28	16.27		

Table-6: SF-36v2™ parameters in two different sexes in the age-group of 31-40 years (n=156)

Parameters	Sex	n	Mean	SD	t-value	p-value
Physical functioning	Male Female	65 91	79.98 75.39	13.20 11.06	2.36	0.02
Role physical	Male Female	65 91	85.88 87.81	14.31 10.48	-0.97	0.33
Bodily pain	Male Female	65 91	88.74 71.90	23.06 25.28	4.25	0.00
General health perceptions	Male Female	65 91	72.85 67.86	16.15 18.61	1.74	0.08
Vitality (Vigor)	Male Female	65 91	69.00 53.41	11.87 18.60	6.38	0.00
Social functioning	Male Female	65 91	81.18 81.87	9.47 7.98	-0.49	0.63
Role emotional	Male Female	65 91	68.6 71.2	18.1 22.2	-0.8	0.42
Mental health	Male Female	65 91	89.38 83.60	15.92 19.40	2.04	0.04

information regarding the perception parameters is not available in many developing countries. In this context, we conducted a questionnaire using SF-36v2™ perception parameters and to the best of our knowledge this study constitutes the first of its kind from Nepal.

Males had significantly higher scores for four sub-scales, namely, physical functioning, bodily pain, and vitality but not with regard to mental health. This indicated that the males have strong feeling of being healthy. This is also reflected in the human development indicators of two genders.[20] Females had low vitality (feeling of tiredness) score. This was true for all age groups of the participants included. This appears to be associated with their both indoor and outdoor works related stress, and relatively poor nutritional status resulting into anemia,[21-23] high fertility rate[21,24] and disparity (high priority to males) in the use of health services.[25-27] Nepalese women usually eat at the last after serving male family members and many occasions they satisfy themselves with very little leftover foods. There is also a high preference to male child in Nepalese society. Large numbers of Nepalese women are sex-trafficked mainly to Indian cities[28] and many of them return with various kinds of health problems including HIV and other sexually transmitted infection.[7] Keeping in view of these social problems, some works focusing on impoverished gender has also been conducted.[29]

In the age-group of less than 20 years, females had significantly low score regarding the social functioning. This result reflects the Nepalese women's activities limited mainly in household works. In Nepal, usually, men go out for outdoor works as well as social activities. Furthermore, during their social activities they also do consultation abut their illness, if any. On the other hand, females had strong feeling about working in healthy condition. Nepalese women usually consider themselves that they have to take care of household work and contribute in the health and wellbeing of children, husband and other male members in the family. Furthermore, this also might be due to the patriarchal perspectives, traditional values and social stigma of exposing their illness they are suffering from. Almost all women carry large and heavy weight within 45 days of delivery.[30] As a result, for example, many women (about 10.0%) in Nepal particularly in rural areas live with uterus prolapse for years**.**

However, in the age-group of 21-30 years and 31-40 years, females showed low score with regard to physical functioning, bodily pain, vitality and mental health compared with males. This appeared to be due to the physiological changes occurred in the body (pregnancy, delivery and lactation) and physical child rearing activities.

Ethnically, Nepalese population is composed of different ethnics. *Bahun/Chhetri* has relatively higher human development indicators whereas the *Dalit* has lowest. *Dalits* in Nepal are discriminated most as they are considered untouchable.[15] The cultural practices, socio-economic status and perception towards health status vary accordingly. *Dalits* had low physical functioning compared with *Adibashi/Janajati*. This appears to be due to the low income of *Dalits* as has been reported from elsewhere. Bennett *et al*,[31]have reported a high prevalence of physical inactivity among low-income housing residents in USA. There are no directly

comparable data from Japan. However, though much has changed since Tokugawa era, *Burakumin* (another term is *Eta*) are the discriminated people in Japanese society.[2] Discrimination against *Burakumin*, in fact, was based on Budda's teaching (prohibition of killing) and Shinto belief of pollution as these people were the butchers, leather workers, grave-diggers, tanners, executioners and, at least in some cases, entertainers.[2,27] This group of people is close resemblance to the untouchable class in Nepal. Regarding the gender, even in today's modern Japanese society, male dominance and other social discriminations are existed. Despite being identified as a 'special needs' group, the older overseas-born Australians of diverse cultural and language backgrounds experience significant disparities in their health and social care needs and support systems.[8] However, in the present study, *Dalits* had significantly high perception score towards the general health *Bahun/ Chhetri* and social functioning compared with *Adibashi/ Janajati*. This might be due to social discrimination they are facing which has led to generation of good bonding among family the members and themselves.

The present findings suggested that there are significant differences in the perceptions of different ethnic populations in Nepal indicating the influence of socio-economic status, cultural / religious practices[21,33] and rural urban areas.[23] As the present study was carried out in the capital city of Nepal, further investigation in the rural areas is advocated to explore contextual scenario. Based on these findings, however, it is recommended that the existing socio-economic status, cultural/religious practices, gender as well as others disparities / discriminations need to be addressed as to change in the present perception about the health related QOL among Nepalese and contribute in the day-to-day productive functioning.

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