# Perceived Health Promoting Education Needs of Middle-aged Population in Dhulikhel Municipality of Nepal

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## **ABSTRACT**

### Background

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# Health promoting education need assessment is of utter importance while conducting health promoting education programs. However little efforts have been put on this by the policy level authorities and there are no studies to assess the perceived health promoting education needs of the middle aged population of Nepal till date.

### Objective

The objective of this study was to assess the perceived health promoting education needs of middle-aged population in Dhulikhel municipality.

### Method

A descriptive cross-sectional study was conducted among 300 respondents using two staged cluster and systematic technique. Face to face interview technique was used for data collection. T-test was used for comparison of dependent variables with independent variables.

### Result

The study revealed that the mean education need score was  $66.66\pm16.09$  (in a score of minimum 25 and maximum 125). Cancer prevention was perceived as the topic of highest education need and retirement planning as the topic of least education need. There was statistically significant difference in the mean perceived education need score between male and female (p=0.048), respondents with exposure and non-exposure to health related programs on mass-media (p=0.020) and mental component summary score <50 and mental component summary scores >=50 (p=0.048).

### Conclusion

This study suggested that the community people have perceived moderate level of health promoting education need. Since cancer prevention was the highest rated topic followed by chronic illness prevention and dementia, it is recommended to focus on these topics while organizing any health promoting education programs in the community.

## **KEY WORDS**

Health promotion, health promoting education, perceived needs

# INTRODUCTION

Health promotion, in present context has drawn the attention of entire world, health promoting education being an integral part of it. Health promotion moves beyond a focus on individual behavior towards a wide range of social and environmental interventions.<sup>1</sup> Health promoting lifestyle is one of the factors that positively contribute to quality of life.<sup>2</sup> Hence, health promoting education need assessment should reflect clearly the perceived needs of the population surveyed and it is vital to focus on both health status and lifestyle related health risk behaviors when surveying health-promoting education needs of middle-aged people.<sup>3</sup>

Globally, of the 57 million deaths in 2008, 36 million (63%) was due to non-communicable chronic diseases (NCDs). This rapid rise of chronic non-communicable diseases represents one of the major health challenges to global development.<sup>4</sup> In Nepal chronic diseases accounts for 50% of all deaths. (WHO 2010).<sup>5</sup> One of the most compelling evidence for high burden of disease in Nepal is provided by annual report of (Ministry of Health and Population) MOHP, in government hospital 81.5% outpatient and 88% of inpatient attendance is due to morbidity related to NCD.<sup>5</sup>

Although needs assessment is widely considered a necessary tool for planning effective programming, many health-promoting educational programs are conducted without surveying the needs of the people.<sup>6</sup> Hence this study serves as a first step to explore the Perceived Health Status, Life Style Pattern and the Health Promoting Education Needs of Middle-aged Population in Dhulikhel Municipality.

# **METHODS**

Descriptive cross sectional research design was used in ward number 1,2,5,7 and 9 of Dhulikhel Municipality. Study population consisted of all middle aged population, males and females residing in Dhulikhel municipality. Two staged cluster and systematic random sampling technique was used in this study. A semi-structured interview schedule consisting of questions related to demographic characteristics, perceived health status, lifestyle pattern and perceived health promoting education needs of middle-aged population was adopted according to SF-12V2 Health Status Survey Questionnaire and Modified Ballard and Morries 25 points for Health Promoting Education Needs.<sup>7-9</sup> The content validity of the instrument was established through seeking opinion of experts and related nursing teachers. The instrument was then translated into Nepali language and opinion of language expert was taken for comprehensibility and simplicity of language and for consistency of the content. The instrument was pretested on 10% of the total sample size among middle aged population from ward number 8 of the same Municipality.

The study was conducted after obtaining an approval from the Research Review Committee of KUSMS. Prior to collecting data, administrative approval was obtained from the Executive Director of Dhulikhel Municipality. Data was collected by interviewing the eligible people through house to house visit. All eligible middle aged people who were available during data collection and gave verbal consent were interviewed. The collected data were reviewed daily for completeness and accuracy. Edited data were entered into the Statistical Package for Social Science Software (SPSS) version 16.0 for statistical analysis using descriptive statistics. The Demographic characteristics of the respondents are presented in Table 1 and 2, perceived health status in Table 3 and 4, Life style in table 5.

# RESULTS

Table 1 depicts that the commonest age group was 60 to 65 years as 23.3% of the respondents belonged to this age group. More than half of them (58%) were females.

# Table 1. General Socio-demographic Variables of the Respondents (n=300)

Variables	Frequency	%	Remarks
Age group (years)			
40 to 45	64	21.3	
45 to 50	65	21.7	
50 to 55	65	21.7	
55 to 60	36	12.0	
60 to 65	70	23.3	
Sex			
Female	174	58.0	
Male	126	42.0	
Educational status			
Illiterate	150	50.0	
Literate	150	50.0	
Educational level (150)			Mean
Informal education	53	35.3	Age= 51.19 Standard
Primary level	26	17.3	devia-
Lower Secondary	11	7.3	tion=7.591
Secondary level	41	27.3	
Higher secondary level	12	8.0	
Above higher secondary level	7	4.7	
Employment status			
Unemployed			
Employed			
Occupation			
Agriculture	123	54.2	
Business	80	35.2	
Service	12	5.3	
Labor	8	3.5	

## **Original Article**

Half of the respondents (50%) were literate among them 35.3% of were able to read and write and only 4.7% of the respondents were educated above higher secondary level. Regarding the employment status 75.7% of the respondents were employed and more than a half were engaged in agriculture (54.2%).

# Table 2. Health Related Socio-demographic Variables of the Respondents

No       221       73.7         No       221       73.7         Yes       79       26.3         Hypertension (n=79)       16.5       8         No       13       16.5         Yes       66       83.5         Diabetes mellitus (n=79)       12       15.2         No       67       84.8         Yes       12       15.2         No       70       88.6         Yes       9       11.4         No       70       88.6         Yes       9       11.4         No       217       72.3         No       217       72.3         Yes       83       27.7         No       217       72.3         Yes       83       27.7         Yes       83       27.7         Within 3 months       57       68.7         Every 3-6 months       15.1       18.1         Every 6-12 months       50       6.0         Fys       272       9.3       10.1         No       28       9.3       10.1         Yes       272       9.7       10.1       10.1 </th <th>Variables</th> <th>Frequency</th> <th>%</th>	Variables	Frequency	%	
Yes       79       26.3         Hypertension (n=79)       13       16.5         Yes       66       83.5         Diabetes mellitus (n=79)       66       83.5         Diabetes mellitus (n=79)       12       15.2         No       67       84.8         Yes       12       15.2         No       67       84.8         Yes       12       15.2         No       70       88.6         Yes       9       11.4         No       70       88.6         Yes       217       72.3         No       217       72.3         Yes       83       27.7         No       217       72.3         Yes       15       18.1         Every 3-6 months       57       68.7         Every 3-6 months       15       18.1         Every 6-12 months       6       7.2         No       28       9.3         Yes       272       90.7         No       28       9.3         Yes       272       90.7         No       28       9.3         Yes       272	Presence of Chronic Disease (n=300)	,		
Hypertension (n=79)       13       16.5         No       13       16.5         Yes       66       83.5         Diabetes mellitus (n=79)       12       15.2         No       67       84.8         Yes       12       15.2         No       70       88.6         Yes       9       11.4         No       70       88.6         Yes       9       11.4         No       70       88.6         Yes       9       11.4         No       217       72.3         No       217       72.3         Yes       83       27.7         No       57       68.7         Every of health checkup (n=83)       12.1         Within 3 months       57       68.7         Every 6-12 months       15       18.1         Every 6-12 months       6.0       7.2         No       28       9.3         Yes       272       90.7         Yes       272       90.7         No       102       37.5	No	221	73.7	
No         13         16.5           Yes         66         83.5           Diabetes mellitus (n=79)         67         84.8           Yes         12         15.2           No         67         84.8           Yes         12         15.2           Chronic Obstructive Pulmonary Disease (n=70)         88.6           Yes         9         11.4           Yes         9         11.4           No         217         72.3           Yes         83         27.7           Yes         83         27.7           Yes         83         27.7           Yes         57         68.7           Every 3-6 months         15         18.1           Every 3-6 months         57         68.7           After more than a year         57         68.7           No         28         9.3           Yes         272         90.7           Yes         272         90.7           No         272         90.7           No         20.7         90.7	Yes	79	26.3	
Yes       66       83.5         Diabetes mellitus (n=79)       67       84.8         Yes       12       15.2         Yes       12       15.2         Yes       12       15.2         No       70       88.6         Yes       9       11.4         Yes       9       11.4         Yes       9       11.4         Yes       217       72.3         Yes       83       27.7         No       217       72.3         Yes       83       27.7         Yes       83       27.7         Yes       15.1       18.1         Every of health checkup (n=83)       17.1         Within 3 months       57       68.7         Every 6-12 months       15       18.1         After more than a year       5       6.0         Yes       272       9.3         Yes       272       9.7         No       272       9.7         No       272       9.7         No       272       9.7	Hypertension (n=79)			
No         67         84.8           Yes         12         15.2           No         12         15.2           Chronic Obstructive Pulmonary Disease (n=79)         10         88.6           Yes         9         11.4           No         70         88.6           Yes         9         11.4           Regular Health Checkup Behavior (n=300)         11.4           Yes         83         27.7           No         217         72.3           Yes         83         27.7           Within 3 months         57         68.7           Every 3-6 months         15         18.1           Every 6-12 months         15         18.1           Fvory 6-12 months         6.0         7.2           After more than a year         5         6.0           No         28         9.3           Yes         272         90.7           No         272         90.7           No         102         37.5	No	13	16.5	
No         67         84.8           Yes         12         15.2           Import Cobstructive Pulmonary Disease (n=70)           No         70         88.6           Yes         9         11.4           Yes         9         11.4           Import Segurar Health Checkup Behavior (n=300)           Regular Health Checkup Behavior (n=300)         217         72.3           Yes         83         27.7           Yes         83         27.7           Within 3 months         57         68.7           Every 3-6 months         15         18.1           Every 6-12 months         15         18.1           Fvor of theal th a year         50         6.0           Mo         28         9.3           Yes         272         90.7           No         272         90.7           No         272         90.7	Yes	66	83.5	
Yes       12       15.2         Pronic Obstructive Pulmonary Disease (n=7)       12       15.2         No       70       88.6         Yes       9       11.4         Yes       9       11.4         Regular Health Checkup Behavior (n=300)       72.3         Yes       83       27.7         Yes       83       27.7         Within 3 months       57       68.7         Every 3-6 months       15       18.1         Every 6-12 months       15       18.1         After more than a year       5       6.0         No       217       22       0.7         Yes       217       9.3       102       9.3	Diabetes mellitus (n=79)			
No       70       88.6         Yes       9       11.4         Regular Health Checkup Behavior (n=300)       11.4         No       217       72.3         Yes       83       27.7         Yes       83       27.7         Interval of health checkup (n=83)       27.7         Interval of health checkup (n=83)       57       68.7         Every 3-6 months       15       18.1         Every 6-12 months       6       7.2         After more than a year       5       6.0         Evpsure to mass-media at home (n=300)       5       6.0         Yes       272       90.7         No       272       90.7         No       272       90.7         No       102       37.5	No	67	84.8	
No         70         88.6           Yes         9         11.4           Regular Health Checkup Behavior (n=300)         2170         72.3           No         2177         72.3           Yes         83         27.7           Interval of health checkup (n=83)         27.7           Within 3 months         57         68.7           Every 3-6 months         151         18.1           Every 6-12 months         60         7.2           After more than a year         5         6.0           Every store to mass-media at home (n=300)         6.0         102           Yes         272         90.7           No         272         90.7           No         102         37.5	Yes	12	15.2	
Yes         9         11.4           Regular Health Checkup Behavior (n=30)           No         217         72.3           Yes         83         27.7           Interval of health checkup (n=83)         27.7           Within 3 months         57         68.7           Every 3-6 months         15         18.1           Every 6-12 months         60         7.2           After more than a year         6         7.2           No         272         90.7           Yes         272         90.7           Yes         272         90.7           No         272         90.7           No         102         37.5	Chronic Obstructive Pulmonary Disease (n=	=79)		
No       217       72.3         Yes       83       27.7         Interval of health checkup (n=83)       27.7         Within 3 months       57       68.7         Every 3-6 months       15       18.1         Every 6-12 months       6       7.2         After more than a year       50       6.0         Every 5-12 months       6       7.2         Mo       28       9.3         Yes       272       90.7         Yes       272       90.7         No       272       90.7         No       272       9.3         Yes       102       37.5	No	70	88.6	
No         217         72.3           Yes         83         27.7           Interval of health checkup (n=83)         27.7           Within 3 months         57         68.7           Every 3-6 months         15         18.1           Every 6-12 months         6         7.2           After more than a year         5         6.0           Exposure to mass-media at home (n=300)         272         9.3           Yes         272         90.7           No         272         90.7           No         102         37.5	Yes	9	11.4	
Yes     83     27.7       Interval of health checkup (n=83)     27.7       Interval of health checkup (n=83)     57     68.7       Every 3-6 months     15     18.1       Every 3-6 months     15     18.1       Every 6-12 months     6     7.2       After more than a year     5     6.0       Exposure to mass-media at home (n=300)     28     9.3       Yes     272     90.7       No     272     90.7       Intervation to the state programs on metal to the state programs on the state program s	Regular Health Checkup Behavior (n=300)			
Interval of health checkup (n=83)         57         68.7           Within 3 months         57         68.7           Every 3-6 months         15         18.1           Every 6-12 months         6         7.2           After more than a year         5         6.0           Exposure to mass-media at home (n=300)         5         9.3           Yes         272         90.7           Exposure to health related programs on metric (n=27)         102         37.5	No	217	72.3	
Within 3 months         57         68.7           Every 3-6 months         15         18.1           Every 6-12 months         6         7.2           After more than a year         5         6.0           Exposure to mass-media at home (n=300)         7.2         9.3           Yes         272         90.7           Exposure to health related programs on weither set user to the set user tot to the set user to the set user tot to the set user t	Yes	83	27.7	
Every 3-6 months     15     18.1       Every 6-12 months     6     7.2       After more than a year     5     6.0       Exposure to mass-media at home (n=300)     5     9.3       Yes     272     90.7       Exposure to health related programs on metric (n=22)     90.7       No     102     37.5	Interval of health checkup (n=83)			
Every 6-12 months       6       7.2         After more than a year       5       6.0         Exposure to mass-media at home (n=300)       5       9.3         No       28       9.3         Yes       272       90.7         Exposure to health related programs on media to media	Within 3 months	57	68.7	
After more than a year       5       6.0         Exposure to mass-media at home (n=300)       2       9.3         No       28       9.3         Yes       272       90.7         Exposure to health related programs on media to the set of the set	Every 3-6 months	15	18.1	
Exposure to mass-media at home (n=300)         28         9.3           No         272         90.7           Exposure to health related programs on mass-media (n=272)         No         102         37.5	Every 6-12 months	6	7.2	
No         28         9.3           Yes         272         90.7           Exposure to health related programs on mass-media (m=272)         No         102         37.5	After more than a year	5	6.0	
Yes27290.7Exposure to health related programs on mass-media (n=272)No10237.5	Exposure to mass-media at home (n=300)			
Exposure to health related programs on mass-media (n=272)No10237.5	No	28	9.3	
No 102 37.5	Yes	272	90.7	
	Exposure to health related programs on mass-media (n=272)			
Yes 170 62.5	No	102	37.5	
	Yes	170	62.5	

Table 2 shows that a little more than a quarter (26.3%) respondents had chronic disease, Hypertension (HTN) being the commonest (83.5%). Only 27.7% had regular health check-ups among whom more than a half (68.7%) had health check-up done within three months. Majority of the respondents that is 90.7% had exposure to massmedia at home among whom more than a half (62.5%) had exposure to health related programs on mass-media.

Table 3 depicts that social functioning domain was the best perceived domain by the respondents with a mean score of 71.50 followed by Role emotional (69.58) and then Role physical (68.04) while the General health domain was the worst perceived domain by the respondents with a mean score of 34.08 followed by vitality (54.25) and then mental health (57.70).

# Table 3. Description of Perceived Health Status of the Respondents (n=300)

Variables	Mean	Std. Deviation
General Health	34.08	14.84
Physical Functioning	58.75	30.27
Role Physical	68.04	23.18
Bodily Pain	60.58	23.72
Role Emotional	69.58	23.99
Mental Health	57.70	19.91
Vitality	54.25	20.26
Social Functioning	71.50	22.216
Physical Component Summary score	36.90	12.07
Mental Component Summary Score	42.17	11.09

# Table 4. Description of Lifestyle Pattern of the Respondents (n=300)

Variables	Frequency	%
Exercise (n=300)		
Perform exercise	42	14.0
Do not perform exercise	258	86.0
Level of exercise (n=42)		
Recommended level or above	27	64.3
Below recommended level	15	35.7
Smoking (n=300)		
Smoke	127	42.3
Do not smoke	173	57.7
Non-smokers (n=173)		
Have never smoked	134	77.5
Smoked, but now quit	39	22.5
Chewing Tobacco (n=300)		
Chew Tobacco	22	7.3
Do not chew tobacco	278	92.7
Non-Chewers (n=278)		
Have never chewed	271	97.5
Chewed, but now quit	7	2.5
Drinking Alcohol (n=300)		
Drink	94	31.3
Do not drink	206	68.7
Non-Drinkers (n=206)		
Have never drank	177	85.9
Drank, but now quit	29	14.1
Level of drinking (n=94)		
Within recommended safe limit	32	34.0
Beyond recommended safe limit	62	66.0
Eating vegetables and fruits (n=300)		
Eat daily	200	66.7
Do not eat daily	100	33.3
Level of intake in daily eaters (n=200)		
In recommended level	7	3.5
Below recommended level	193	96.5

Table 4 shows that regarding exercise performing habit, out of 300 respondents, only 14% performed exercise, more than a half that is 57.7% did not smoke tobacco, 97.5% didn't chew tobacco, less than a half respondents that is 31.3% drank alcohol and 66.7% ate vegetables and fruits daily.

Table 5 shows that the three topics on which the respondents perceived highest needs were cancer prevention, chronic illness prevention and dementia with the mean education need scores of 3.73, 3.62 and 3.37 respectively. The topics on which the respondents perceived least needs were retirement planning, menopause and hormones and Suicide prevention with the mean education need score of 1.63, 1.88 and 2.11 respectively.

# Table 5. Respondents' Perceived Health Promoting Education Needs (n=300)

Topics	Mean	S.D.
(Dealing with Normal Healthy Ageing)		
Healthy Diet	3.19	1.121
Family Communication	2.67	1.008
Fitness and Exercise	2.73	1.140
Medication management	2.43	1.229
Caring for a Family Member	2.62	1.016
Leisure Opportunities	2.40	.974
Menopause and Hormones	1.88	1.093
Relating to Adult Children	2.60	1.018
Living Wills	2.29	1.088
Cancer Prevention	3.73	1.019
(Psycho/Social Health)		
Elder Abuse	2.86	1.051
HIV/AIDS	3.06	1.157
Suicide Prevention	2.11	1.093
Depression	2.92	.988
Grieving and Loss	2.52	.993
(Managing Life Changes)		
Retirement Planning	1.63	.958
Sexual Dysfunction	2.42	1.129
Adjust the Death of Parents or a Partner	2.71	1.046
Strengthening and Enriching Marriage	2.62	1.089
Managing Worries	3.02	1.089
Estate Planning	2.15	1.080
(Maintaining/Promoting Health)		
Dementia	3.37	1.054
Chronic Illness Prevention	3.62	1.092
Positive Aspects of Ageing	2.67	1.057
Smoking Cessation	2.22	1.458

# DISCUSSION

In the present study, respondents' perceived the mean Physical Component Summary score was 36.90±12.07,

which is lower than in other three studies conducted by Su (44.78±5.35), Bhandari (51.42± 7.25) and Savage et al. (48.06).<sup>3,10,11</sup> In this study, respondents' perceived the mean Mental Component Summary score was 42.17±11.09 which is similar to the study done by Su et al. (42.73±8.69) but lower than two other studies done by Bhandari et al (49.40±8.93) and Savage et al. (50.38).<sup>3,10,11</sup> The highest respondents' perceived value was reported in "Social Functioning" domain (71.50±22.21) in this study however Su et al. has argued it as the domain with 3<sup>rd</sup> highest reported value (75.93±25.40).<sup>3</sup> In this study, the lowest value was reported in "General Health" domain (34.08±14.84) but in the study conducted by Su et al. it is the domain with 4<sup>th</sup> lowest reported value (61.98±26.06) which is nearly double the value than the present study.<sup>3</sup>

In the present study 42.3% respondents were smoker which is higher than the study conducted by Su et al. (19%) but similar to the study done by Bhusal (42%).<sup>3,12</sup> The higher rate of smoking might be because of stress, family problems, and less awareness about harmful effects of nicotine. Among total respondents 31.3% respondents drank alcohol in present study which is higher than other studies were done by Su et al. (28.2%), Bhusal et al. (23%), Society for Local Integrated Development (SOLID) Nepal (28.5%).<sup>3,12</sup> In this study almost all the respondents (96.5%) ate vegetables and fruits below recommended level which is similar to other study conducted by Bhusal et al.<sup>12</sup> Another study conducted in Nepal also showed the extremely high (99%) prevalence of insufficient intake of fruit and vegetables, which suggests an urgent need for public health interventions.<sup>13</sup>

The perceived mean education need score was  $66.66\pm16.09$  in the present study which is lower than in the study done by Su et al. (mean score -80.68) and Ballard and Morris (mean score-71.31 in a 4 point scale).<sup>3,8</sup> In the present study, highest perceived health promoting education need was "Cancer prevention" with a mean score of 3.73 which is slightly lower than the study by Su et al. (mean score-3.63) but similar to the study by Weathers.<sup>3,6</sup> In this study respondents' least perceived health promoting education need was "Retirement planning", with mean score of 1.63 which is lower than study by Su et al. (mean score -3.18) and Ballard and Morris (mean score-2.29 in a 4 point scale).<sup>3,8</sup>

Respondents with higher level of education had higher need in health-related information, while in present study respondents' perceived mean education need score didn't have significant difference between literate and illiterate respondents.<sup>14</sup>

The mean education need score had significant difference between males and females in the present study, males having more perceived needs than females which is in contrast with the study by Ballard and Morris but is supported by the study by Talvi et al.<sup>8,15</sup> The mean education need score had significant difference between respondents with Mental Component Summary <50 and with Mental Component Summary  $\geq 50$  in the present study, which is supported by the study Talvi et al. where self-assessed health was strongly associated with health promotion needs.<sup>15</sup>

In the recent years, health promotion is increasingly receiving high priority in national health policies and strategies in most developing countries including Nepal. Though several studies on health promotion have been carried out, no studies have contributed to assess the perceived health promoting education needs of the population. Since this study aims to find out the baseline data on the Perceived Health Promoting Education Needs of a general community of Nepal, any health promoting education programs given based on these findings can ensure productive and effective outcomes. Also it can direct the concerned authorities at policy level while planning a health education program for the general community in Nepal.

Daily physical activities were not taken into account while assessing for exercise performing habit of the respondents. There could be under reporting or over reporting of the education needs by the respondents as Likert scale was used.

Since education need assessment is always dependent on the respondents' prior experience with education, this can affect the respondents' response regarding the education needs. This health promoting education need assessment might not have been be effective for those who have had few educational opportunities because they may not have an accurate picture of education.

## CONCLUSION

The mean education need score was found to be 66.66±16.09 for the 25 topics (with lowest mean score being 25 and highest mean score being 125). The topic with greatest interest was Cancer prevention followed by chronic illness prevention and then Dementia. The topic of least interest was Retirement planning followed by Menopause and hormones and Suicide prevention. So, Dhulikhel municipal office should focus more on cancer and chronic illness prevention while conducting educational programs in the community.

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