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Unmet Needs of Physical Activities and its Associated Factor among Elderly People Residing in Chandragiri Municipality

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ABSTRACT

Introduction: Unmet physical activity need is the belief that one's current level of physical activity is insufficient and, as a result, different from the recommended level of physical activity that is sufficient for overall health. The research aims to identify the unmet needs of physical activities and its associated factor among elderly people residing in Chandragiri Municipality.

Methods: A sample of 278 was taken for the study. The study population was elderly people of Chandragiri municipality. A community-based, descriptive cross-sectional study method was used in a selected ward of Chandragiri Municipality.

Result: The results show that family arrangement, mental issues, cultural beliefs, and any chronic disease have a significant correlation with unmet needs of physical activities.

Conclusion: The result shows that unmet needs for physical activities have become a serious issue for old age people for living a healthy life.

Key Words: *Elderly people; Physical Activities; Unmet need.*

INTRODUCTION

Physical activity is an active lifestyle due to its health advantages, which include reducing chronic illnesses, mobility loss, and preserving community independence. The excessive physical inactivity of fragile older persons in residential care institutions is well known, but the unmet demand for physical exercise among ambulatory, community-living individuals has not been addressed. Unmet physical activity need is the belief that one's current level of physical activity is insufficient and, as a result, different from the recommended level of physical activity that is sufficient for overall health.[1]

Engaging in regular physical activity is one of the best ways to lower the risk of non-communicable diseases and biological risk factors such as obesity and hypertension, as well as to lengthen life expectancy. The chance of getting chronic non-communicable health disorders rises with age.[5]

The objective of this research was to assess the unmet needs of physical activities and their associated factors among elderly people residing in Chandragiri Municipality.

METHODS

The study employed a descriptive cross-sectional design to investigate the unmet needs of physical activities of daily living among community-based elderly people in Chandragiri Municipality. This design was chosen to facilitate fact-finding and gather adequate information relevant to the study objectives.

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The study was conducted in Chandragiri Municipality, located in Province No. 3, in the southwest part of the Kathmandu Valley. The municipality covers a total area of 43.92 sq. km and consists of 15 wards. According to the 2021 Nepal Census, the total population of Chandragiri Municipality is 136,860, comprising 68,303 males and 68,557 females**.** Primary data served as the main source of information for the study. A household survey method was applied to collect quantitative data from households. In addition, secondary data was gathered through a literature review of relevant sources. For this purpose, databases such as PubMed and Google Scholar were utilized.

The study population consisted of elderly individuals aged 60 and above residing in Chandragiri Municipality. The sampling unit was an individual respondent of Chandragiri Municipality. A sample size was calculated using Cochran's formula, The following parameters were considered while calculating the sample size: Prevalence (p) = 23.8% (0.238) (From, Physical activity, health and well-being among a nationally representative population-based sample of middle-aged and older adults in India, 2017–2018, the prevalence is 23.8%).[22]

Complement of P (q) = 1-0.238

= 0.762

Z = Z score at level of significance 5% and confidence interval 95%, which is 1.96

E = allowable error taken as 5%

By using formula,

$n = (z^2pq)/e^2$,

= (1.96)2*0.238*0.762/ (0.05)2

=3.84*0.181356/0.0025

=278

The proportion of elderly people in Ward 1 was calculated using the basic mathematical equation: (Total Number of Elderly People in Ward 1×100)/ Total Elderly Population in Chandragiri Municipality. Simple random sampling was used to select the study wards, and Wards 1, 6, 7, 8, and 12 were chosen using the lottery method. Data collection was conducted using a semi-structured questionnaire developed based on a literature review and study objectives. The questionnaire was categorized into sections, including socio-demographic information, self-made questions by reading references and discussing with teachers, and associated factors, and was translated into simple Nepali.

Face-to-face interviews were carried out by the researcher with elderly residents of Chandragiri Municipality. Pre-testing of the tools was done on 10% of the sample size in Ward 3 to ensure reliability. Data was edited in the field immediately after collection, entered into EpiData version 3.1, and analyzed using SPSS version 22.

The study used descriptive statistics (frequency, percentage, mean/median, standard deviation/interquartile range) for data analysis, with the chi-square test used to assess relationships between variables. Data validity was ensured through consultation with a supervisor and subject experts, and the research tool was developed following an extensive literature review. The tool, originally in English, was translated into simple Nepali to minimize bias. Data entry was done in EpiData version 3.1 and analyzed using SPSS version 22. Questionnaires were checked and edited on the same day of data collection to ensure accuracy. Inclusion criteria included willingness to participate, while exclusion criteria excluded those unable or unwilling to respond. Before the study, a Permission letter from college was taken and a Permission letter from Chandragiri Municipality was also taken. Ethical letter with Ref.No.08/82/51 was taken from the Institutional Review Committee of Nobel College. Written informed consent was obtained, and confidentiality was maintained, with data used solely for the study. A key limitation was recall bias, and the study's findings may not be generalizable beyond the elderly population of Chandragiri Municipality.

RESULT

Table 1. Distribution of respondents according to socio-demographic characteristics

Socio demographic characteristics	Frequency (n=278)	Percentage
Age (in years)		
Less than 78	217	79
More than 78	61	21
Mean ± S. D	71.2±7.782	
Gender		
Male	116	42
Female	162	58
Ethnicity		
Brahmin	71	25
Chhetri	56	20
Janjati	150	53
Dalit	1	1
Religion		
Hindu	271	97
Christian	1	1
Buddhist	6	20
Marital status		
Married	169	61
Unmarried	7	3
Widow/widower	100	35

Socio demographic characteristics	Frequency (n=278)	Percentage
Separated	2	1
Education		
Illiterate	229	82
Literate	49	18
Occupation		
Unemployment	156	56
Employment	122	44
Family Arrangement		
Nuclear	230	83
Joint	48	17
Living Arrangement		
Living with family	244	88
Living alone	34	12

The majority of respondents fell within the 70-74 age group, accounting for 24% of the total, followed closely by those aged 65-69 years at 23%. Among the participants, 162 (58%) were female, while 116 (42%) were male. Hinduism was the predominant religion, with 271 (97%) identifying as Hindus, while only a small number practiced Buddhism or Christianity.

A significant portion of the respondents, 174 (62%), reported that they couldn't read or write, and most were unemployed at 176 (63%). The remaining respondents included 37 (14%) housewives, 34 (12%) in service jobs, and 31 (11%) engaged in farming.

More than one-third of the respondents lived in nuclear families, totaling 230 (83%), while the rest resided in joint family setups. Additionally, a substantial 244 (88%) lived with family members, whereas 34 (12%) lived alone

Table 2. Engaging in physical activity

Engaging in physical activity	Frequency (n=278)	Percentage
Doing physical activity		
Daily	161	58
Several times a week	23	8
Once a week	4	2
Rarely	57	20
Never	33	12
Types of physical activity (n=284) MR		
Walking	263	92
Running	1	1
Yoga	2	1
Strength training	1	1
Flexibility exercise gardening swiping	10	3
Group exercise	7	2
Walk regularly		
Yes	182	66
No	96	34
Walk for health benefit		
Yes	218	78
No	60	21
Kilometer walking in a day		
1-4 kilo meter	168	61
5-10 kilometer	18	6
not sure	92	33
Preference for travelling for 10 min distance		
By walking	158	56
By using vehicles	72	26
Both	48	18
Work around home (sweeping, wash cloth and dishes		
Sometimes	122	43
Regular	78	28
Often	6	4
Never	72	25
Accessible to do physical activities		
Parks	14	5
Senior centers	248	89
No place for physical activities	16	6

The majority of respondents (69%) reported joint pain as a barrier to physical activities, followed by fear of injury (17%), lack of motivation (7%), lack of social support (6%), physical limitations or disabilities (4%), and lack of suitable facilities (1%). Among 278 respondents, 78% stated cultural beliefs did not prevent physical exercise, while 19% reported otherwise. Regarding mental health, 42% often experienced issues that hindered physical activities, while 41% did not. Most respondents (89%) were self-motivated to engage in physical activities, 10% lacked any motivation, and 1% were motivated by family. In leisure time, 54% sometimes engaged in physical activities, 13% did so regularly, 3% often, and 30% never. Additionally, 41% watched TV or mobile for less than an hour daily, 26% for more than an hour, and 33% were unsure.

Table 3. Chronic illnesses that prevents to do physical activities

Chronic illness	Frequency (n=278)	Percentage
Yes	133	48
No	145	52
Diseases that prevent doing physical activity (n=225) MR		
Hypertension	114	32
Diabetes	42	19
Cancer	3	2
Thyroid	6	3
Arthritis	84	37
Other(specify)	18	7
Heart disease	6	36
Uric acid	5	30
Back Pain	3	12
Paralysis	2	11
Depression	2	11
Respiratory problem		
Yes	78	29
No	200	71
Respiratory problem that prevents to do physical activity		
Pneumonia	1	1
COPD	77	99
Factors to prevent to do physical exercise		
Joint pain	130	69
Physical limitation or disability	9	4
Lack of social support or comp	12	6
Lack of suitable facilities	2	1
Lack of motivation	14	7
Fear of injury	34	17
Cultural belief		
Sometimes	55	19
Regular	1	1
Often	4	2
Never	218	78
Mental health issue		
Sometimes	39	14
Regular	3	3
Often	119	42
Never	117	41
Motivated to do physical activity		
Self-motivated	249	89
From family	2	1
No one	27	10
Hour, you watch TV or mobile in a day		
Less than 1 hour	113	41
More than 1 hour	73	26
Don't know not sure	92	33
Forget doing physical activities while watching TV or mobile		
Sometimes	88	31
Regular	4	2
Often	3	2
Never	183	63
Do any physical activities in leisure time		
Sometimes	147	54
Regular	37	13
Often	9	3
Never	85	30
Needs for elderly people		
Make parks for elderly people	9	3
Space for doing exercise	236	84
Build more senior citizen friendly center	33	13

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Table 4. Factor associated with unmet physical activities

Variable	Category	Unmet needs of physical activities		Chi-square test	P-value
		Met Physical activities	Unmet physical activities		
Family Arraignment	Nuclear	198 (86.1)	32 (13.9)	12.648	0.001*
	Joint	31(64.6)	17 (35.4)		
Accessible of facilities to do physical activities	Parks	14 (100.0)	0 (0.0)	10.598	0.005*
	Senior centers	206 (83.1)	42 (16.9)		
	No place for physical activities	9 (56.3)	7 (43.8)		
	Strength training	2(100.0)	0 (0.0)		
	Flexibility exercise gardening ,sweeping	10 (100.0)	0 (0.0)		
	Group exercise	7 (100.0)	0 (0.0)		
Factor that prevents to do physical activity (self-esteem)	Joint pain	73(82.0)	16(18.0)	45.562	0.010*
	Physical limitation or disability	2(100.0)	2(100.0)		
	Lack of social support or companionship	5(82.0)	1(100.0)		
	Lack of motivation	2(100)	0(00.0)		
	Fear of injury	23(83.0)	1(100.0)		
Any chronic diseases	Yes	103 (77.4)	30 (22.6)	4.269	0.039*
	No	126 (86.9)	19 (13.1)		
Chronic illness(disease)	Hypertension	103 (87.5)	15 (12.5)	44.296	0.019*
	Diabetes	26 (84.8)	5 (15.2)		
	Cancer	1 (100.0)	0 (0.0)		
	Thyroid	7 (77.8)	2 (22.2)		
	Arthritis	3 (50.0)	3 (50.0)		
	Other (specify)	4 (80.0)	1 (20.0)		
Respiratory disease	COPD	53 (69.7)	23 (30.3)	18.823	0.001*
	Pneumonia	0(00.0)	1(100.0)		
Cultural belief prevents to do physical exercise	Sometimes	13 (23.6)	42 (76.4)	170.814	0.000*
	Regular	0(0.0)	1 (100.0)		
	Often	3 (75.0)	1 (25.0)		
	Never	213 (97.7)	5 (2.3)		
Mental health issue that prevents to physical exercise	Sometimes	23 (59.0)	16 (41.0)	40.346	0.000*
	Regular	2 (66.7)	1 (33.3)		
	Often	89 (74.8)	30 (25.2)		
	Never	115 (98.3)	2 (1.7)		
Hour to watch TV or mobile ai in a day	<1 hour	85 (75.2)	28 (24.8)	7.951	0.019*
	>1 hour	61 (83.6)	12 (16.4)		
	Don't know not sure	83 (90.2)	9 (9.8)		
Prevents doing physical activities while watching TV or mobile	Sometimes	71 (80.7)	17 (19.3)	10.434	0.015*
	Regular	1 (25.0)	3 (75.0)		
	Often	2 (66.7)	1 (33.3)		
	Never	155 (84.7)	28 (15.3)		
	Space for doing exercise	194 (82.2)	42 (17.8)		
	Build more senior citizen friendly center	27 (81.8)	6 (18.2)		

The above table presents study findings, which are divided into two parts: met and unmet physical activities. The results indicate that family arrangement and access to facilities for physical activities have a significant correlation with the unmet need for physical activities. Additionally, factors that prevent physical activity, such as self-esteem, chronic disease, respiratory problems, cultural beliefs, mental health issues , time spent watching TV or using mobile devices, and distraction from physical activities due to screen time , also show significant correlations with the unmet need for physical activities. However, motivation to engage in regular physical activities, participation in leisure-time physical activities, and perceived needs of elderly individuals do not show any significant correlation.

DISCUSSION

In our study, chronic illness such as hypertension, diabetes, cancer, thyroid, arthritis, and others variable prevent doing physical activities and unmet needs of physical activities increased whereas, the outcome variables of interest will be grouped into three categories for reporting the review findings: cardio-metabolic conditions(T2DM, CHD, Hypertension (HTN), metabolic syndrome, obesity measures), musculoskeletal conditions (osteoporosis, neck and back pain) and cancer (breast and colorectal cancer). These three categories will also include the relevant risk markers. Corresponding authors will be contacted for missing data or if additional information is required to calculate the effect sizes. If these attempts are unsuccessful, only the narrative synthesis will be proved in this study .[9]

In our study, 83.3% of females and 81.0% of males engage in physical activity, whereas 19.0% of males and 16.7% of females have unmet needs for physical activities. Only family arrangement was strongly associated with unmet needs for physical activities. At baseline, 67% (68% of women and 63% of men) were willing to increase their physical activity level, and 36% (35% of women and 37% of men) felt that they had no opportunities to do so. In total, 14% (15% of women and 12% of men) were categorized as having unmet physical activity needs at baseline, because they reported willingness to increase their physical activity while also perceiving no opportunity to do so. Baseline individual and environmental characteristics are shown according to the presence or absence of unmet physical activity needs. People with unmet physical activity need to live with someone and have depressive symptoms, good cognitive functioning, slow walking speed, musculoskeletal diseases, and perceived walking activity need. In the multivariate model studying individual factors, fear of moving outdoors was an independent predictor of unmet physical activity need.[20]

In our study, 182 participants (83.5%) reported engaging in physical activity, while 36 individuals (16.5%) indicated they do not. Among those surveyed, 47 people (78.3%) do not walk for health benefits, and 13(21.7%) do not participate in any form of physical activity. Our findings identified several barriers to physical activity, including joint pain, physical pain, physical limitation or disabilities, lack of social support or companionship, insufficient facilities, low motivation, and fear of injury ,all of which contribute to the hindrance of an active lifestyle.

CONCLUSION

The study aimed to assess the unmet needs of physical activities and their associated factors, as well as to determine the relationship between socio-demographic factors among older adults residing in Chandragiri Municipality. More than males, females were suffering from unmet needs for physical activities. The result shows that unmet needs for physical activities have become a serious issue for old age people. Family arrangement shows a more significant association with unmet needs of physical activities than those living with nuclear families. Additionally, respiratory problems show a more significant association with unmet needs for physical activities. Other factors like age, gender, ethnicity, education, occupation, and living arrangements did not reveal any significant associations. Additionally, engaging in physical activities, having access to facilities for exercise, experiencing chronic illness, cultural beliefs, and mental health issues, among other elements, also showed no significant association.

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CONFLICT OF INTEREST

None

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