

Nutritional Status and its associated factors among adolescents in higher secondary schools of Pokhara Valley

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Introduction

An adolescence is a period between 10 to 19 years of age, marked by intense body changes that influence the nutrition requirement¹. It is a window of opportunity for compensating for early childhood growth failure.

However, due to several factors like socio-economic status, parental characteristics, dietary practices, lack of physical activity put them at risk of under nutrition as well as over-nutrition

According to Adolescent nutrition survey in Nepal, the prevalence of under nutrition (underweight: BMI < 18.5) among adolescent aged 15-19 years was 42.2%, while overweight was 1.8%².

Nevertheless, there is paucity of study among adolescents, particularly adolescent boys, on their nutritional status and factors associated with it

Objectives

This study aimed to :

- assess the nutritional status of adolescents studying in higher secondary schools of Pokhara valley
- identify the associated factors of nutrition status in relation to socio-demographic, socio-economic, food consumption and physical activity

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Methods

Quantitative study was done among students in class 11 and 12 of seven randomly selected public schools of Pokhara Valley. Data was collected through self-administered questionnaire. A total of 404 respondents aged 16-19 years were included in the study.

• Anthropometric measurements were taken using SECA scale and stadiometer,

Based on BMI, nutrition status was categorized as underweight, normal and overweight²

• Minimum Dietary Diversity-Women (MDD-W) was used to assess the dietary diversity score.

Minimum Dietary Diversity Score was determined to be 5 or greater than 5 (out of 10)³.

• Level of physical activity was assessed using Global Physical Activity Questionnaire (GPAQ)⁴. It was categorized as

Total MET minutes \geq 600 : Physically Active

Total MET minutes < 600: Physically Inactive

Data were entered in EpiData 3.1 version and analyzed in IBM SPSS version 22.

Limitation:

Analysis of independent variables with obesity was not assessed.



Results

Chart 1 :Nutritional Status of adolescent

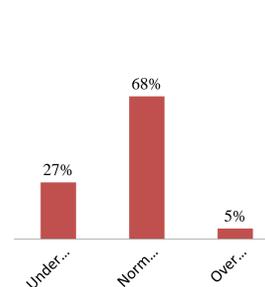


Chart 2: Dietary diversity among adolescents

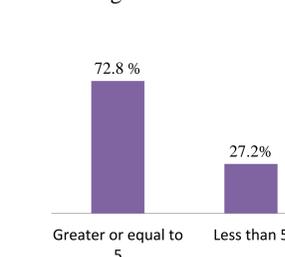


Chart 3: Consumption of different food groups by adolescents

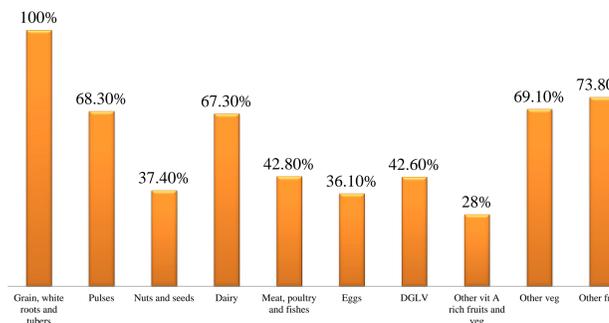


Table 1: Adjusted changes in factors associated with underweight among adolescents

Characteristics	COR(95% CI)	AOR(95% CI)
Age		
18-19	0.607(0.38-0.95)	0.613(0.37-0.99)*
16-17	1	1
Session		
Day	1.69(1.04-2.749)	1.2 (0.74-2.13)
Morning	1	1
Ethnicity		
Brahmin/Chhetri	2.60 (1.56-4.35)	2.24(1.29-3.89)*
Other	1	1
Mother's education		
Attended school	3.38(1.48-7.70)	2.08(0.87-4.95)
Never attended	1	1
Mothers occupation		
Non-employed	0.639(0.41-0.99)	0.74(0.46-1.19)
Employed	1	1
Consumption of eggs		
Yes	0.60(0.376-0.98)	0.60(0.36-0.99)*
No	1	1

Key Findings

The adolescents with underweight were found to be 27.2% (BMI<18.5).

Dietary diversity score was not found to be statistically significantly associated with the underweight among adolescents.

Adolescents aged 18 to 19 years are less likely to be underweight compared to adolescents aged 16 to 17 years (AOR: 0.613, 95% CI: 0.37-0.99).

Adolescents who consumed eggs were 40% less likely to be underweight as compared to those who did not consume egg (AOR: 0.60, 95% CI: 0.36-0.99).

Conclusion

There's the prevalence of both underweight and overweight among the adolescents. Although dietary diversity score was not found to be significantly associated with underweight, consumption of egg was found to be protective against underweight. This findings will be relevant to plan the nutrition intervention among adolescents.

References

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2. Nepal Health Research Council. Adolescent Nutrition Survey. 2014.
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4. World Health Organization. Global Physical Activity Questionnaire (GPAQ) analysis guide. Geneva. 2012

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