



Nutritional Knowledge of Women Police of Hubballi-Dharwad

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ABSTRACT

Good nutrition knowledge is first step in attaining good health and fitness. An investigation was carried out during 2013-2014 at UAS Dharwad, Karnataka. To assess the nutritional knowledge of 90 urban and rural women police working in technical cadres of police department of Hubballi-Dharwad. It was resulted that, nutritional knowledge of 71.11 per cent was high and 27.78 per cent recorded medium knowledge scores. Strong positive association was recorded for educational qualification and nutritional knowledge of women police but not with nutritional status.

Key words: Nutrition knowledge, BMI, Child nutrition

INTRODUCTION

Good nutrition knowledge helps in acquisition of good health. Sound nutrition is an essential component of good health. In India, as a police recruit, emphasis laid on both physical and mental fitness. The occupation of policing would demand that police officers stay fit as a part of job requirements. Police personnel need to stay in shape by engaging in regular exercises and maintaining a balanced nutrition and diet by having the right amounts of dietary nutrients. Optimum knowledge regarding planning and preparation of healthy food to stay fit and healthy is important for the police women. The study aimed to assess the nutritional knowledge of rural and urban women police.

MATERIAL AND METHODS

A total of 90 police women from 22 rural and urban police stations (including a women police cell) included in the investigation. A self structured questionnaire was used to assess the nutritional knowledge of women police. Questions were from the main areas of basic nutrition and health aspects, comprising sub areas of the nutrient source, cooking methods, deficiency diseases and child nutrition. The questionnaire was administered to the police women in their leisure time through personal interview.

The nutritional knowledge questionnaire consisted of 25 true or false questions, which could be answered in true, false or do not know alternatives.

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Every correct answer carried one mark and no marks were allotted for incorrect answers or do not know responses. The total marks allotted for whole questionnaire was 25 marks. The nutrition knowledge scores of subjects were further classified into low moderate and high knowledge scores based on the formula given below.

High knowledge = Mean score + (SD*0.425) = X category
 Low knowledge = Mean score - (SD*0.425) = Y category
 The scores higher than Y and less than X were considered as moderate knowledge category.

RESULTS AND DISCUSSION

Table 1: Performance of police women in different areas of nutrition knowledge

N=90

Area	Correct responses	
	Mean	Range
Nutrient source	76.11	53.00-89.00
Child nutrition	79.00	74.00-84.00
Nutrition and health	79.07	49.00-90.00
Overall	78.06	49.00-90.00

Good nutrition knowledge is first step in attaining good health and fitness. Assessment of nutrition knowledge in different areas of nutrition police personnel revealed interesting results (Table 1). The overall nutrition knowledge score attained by respondents 78.06, which ranged widely from 49.00 to 90.00. The data deduced that the mean scores in all the three areas of nutrition knowledge were similar among police personnel. Number

of correct responses in the area of nutrient source was 76.11, with a range of 53.00 to 89.00. The mean or correct responses regarding child nutrition was 79.00, which ranged between 74.00 to 84.00. Similarly, the mean number of correct responses in the area of nutrition and health was 79.07, however, a wide range for the number of correct responses for the different areas of nutrition

Table 2: Nutrition knowledge of police women

N=90

Women police	Category			Total (%)
	Low (15.00-20.55)	Medium (20.56-22.41)	High (22.42-25.00)	
Constables	01 (1.28)	21 (26.93)	56 (71.79)	78 (86.67)
Head Constables	-	01 (14.29)	06 (85.71)	07 (7.78)
Police Sub Inspectors	-	01 (33.33)	02 (66.67)	03 (3.33)
Assistant Sub Inspectors	-	02 (100)		02 (2.22)
Total	01 (1.11)	25 (27.78)	64 (71.11)	90

Values in parentheses indicate percentages

Evaluation of nutrition knowledge of selected police personnel using a standard questionnaire revealed that a majority of police Constables fared high in their nutrition knowledge (Table 2). It could be observed that among 78 women police Constables, 56 (71.79%) scored high on nutrition knowledge questionnaire scoring between 22.42 to 25.00 points, followed by 21 (26.93%) women police Constables scoring medium scores ranging between 20.56 to 22.41 points. Among seven women Head Constables a majority (6 or 85.71%) scored high scores for nutritional knowledge and one officer scored medium scores. Among the three Police Sub Inspectors, two officers scored high whereas one officer

was mediocre in nutritional knowledge. The Assistant Sub Inspectors in the present investigation recorded medium scores for the nutritional knowledge test.

On overall basis 71.11 per cent of the police personnel recorded high nutritional knowledge scores and 27.78 per cent recorded medium scores and only 1.11 per cent exhibited low scores.

Statistical Analysis: The results obtained were analyzed employing following statistical methods (SPSS statistical package, version 16.0). Chi-square analysis was carried out to know the association between variables, using the formula

$$\chi^2 = \frac{\sum (O_i - E_i)^2}{E_i}$$

Where,

O_i = Observed frequency

E_i = Expected frequency

Table 3: Association between educational qualification and nutritional knowledge of women police

N=90

Education qualification	Nutritional knowledge			Total (%)	Modified χ^2
	Low (15.00 - 20.55)	Medium (20.56 - 22.41)	High (22.42 - 25.00)		
Less than matriculate	01 (100)	-	-	01 (1.11)	95.30**
Matriculate	-	10 (35.71)	18 (64.29)	28 (31.11)	
Pre University	-	08 (29.63)	19 (70.37)	27 (30.00)	
Graduate	-	05 (16.13)	26 (83.87)	31 (34.45)	
Post graduate	-	02 (66.67)	01 (33.33)	03 (3.33)	
Total	01 (1.11)	25 (27.78)	64 (71.11)	90	

Values in parentheses indicate percentages

**Significant at P≤0.01

Adequate knowledge of nutrition is very important to be able to make appropriate dietary decisions with respect to food selection and consumption. Association between educational qualification and nutritional knowledge of women police is presented in **Table 3**. It was observed that among a total of

90 police women selected for the investigation, maximum percentage of women were graduates (34.45%), among whom 83.87 per cent scored high for nutritional knowledge, with scores ranging between 22.42 to 25.00, followed by 16.13 per cent personnel scored medium nutritional knowledge ranging from

20.56 to 22.41. It was revealed that among the group of matriculate women police (31.11%), a majority of them scored high for nutritional knowledge (64.29%). The group was also represented by women police who scored medium scores for nutritional knowledge (35.71%). It was also observed that, among police women with Pre University Certificate (30.00%), a majority of them (70.37%) scored high scores for nutritional knowledge, followed by medium (29.63%) nutritional knowledge scores. Among post graduate police women (3.33%), a majority of them (66.67%) scored medium scores for nutritional knowledge, followed by single

woman police who scored high for nutritional knowledge. Further, it was observed that one woman who was appointed on compassionate grounds and scored low nutritional knowledge. On over all bases, among a total of 90 police women, a majority of them belonged to high nutritional knowledge category (71.11%). Followed by 27.78 per cent of women police scored medium nutritional knowledge. However, single women police scored low for nutritional knowledge. On overall, strong significant association between educational qualification and nutritional knowledge was recorded.

Table 4: Association between nutritional knowledge and nutritional status of women police

N=90

Nutritional knowledge	Nutritional status					Total (%)	Modified χ^2
	Under Weight	Normal range	Pre obese	Obese Grade I	Obese Grade II		
	< 18.50	18.50 – 22.90	23.00-24.90	25.00-29.90	> 30.00		
Low (15.00-20.55)	-	01 (100)	-	-	-	01 (1.11)	4.70 ^{NS}
Medium (20.56-22.41)	-	09 (36.00)	07 (28.00)	05 (20.00)	04 (16.00)	25 (27.78)	
High (22.42-25.00)	03 (4.68)	18 (28.12)	14 (21.88)	19 (29.70)	10 (15.62)	64 (71.11)	
Total	03 (3.33)	28 (31.11)	21 (23.33)	24 (26.67)	14 (15.56)	90	

Values in parentheses indicate percentages

NS –Non significant

In order to remain healthy and physically fit and to lead healthier life style it is necessary to possess good nutritional knowledge and practices. Association between nutritional knowledge and nutritional status of women police is shown in Table 4. It was observed that nutrition knowledge of 71.11 per cent of respondents was high with scores ranging between of 22.42 to 25.00, among which a majority of women police (29.70%) belonged to obese grade I category with BMI ranging between 25.00 to 29.90, followed by 28.12 per cent of respondents belonging to normal category and BMI ranging between 18.50 to

22.90. Whereas, 21.88 per cent belonged to pre obese category with BMI ranging from 23.00 to 24.90. The group was also represented by obese grade II (15.62%) and underweight (4.68%) category with BMI of more than 30 and less than 18.50, respectively for the two groups.

It was revealed that a total of 27.78 per cent of women police scored medium nutritional knowledge among which a majority of police women belonged to normal category of BMI (36.00%). The group was also represented by 28 per cent pre obese women police, followed by 20 per cent grade I obese

police personnel, while, 16 per cent of women police belonged to grade II obesity. Further, it was found that single woman police scored low for nutritional knowledge and belonged to normal BMI category. On over all basis, among a total of 90 women police, most of them were in normal BMI (31.11%) followed by obese grade I (26.67%). However, 23.33 per cent women police were grouped under pre obese category, 15.56 per cent were considered as obese grade II and few women police (3.33%) were considered as underweight category. On overall, non significant association was recorded.

Kayapinar and Savas². indicated that there were differences between knowledge acquired and actual practice among 96 police personnel of Turkey. It was indicated that the personnel became overweight due to lack of physical activity. It was also evident from the present investigation nutritional status of women police was not associated with either the nutritional knowledge or diet quality (Table 4). A strong significant association was found between educational qualification and nutritional knowledge of women police (Table 3). These results were on par with those of Yelen³ who revealed that nutritional knowledge index score of 95.22 per cent among educated women, viz., lady teachers who were either graduates or postgraduates reflected good nutritional knowledge. Thus the

results of the study indicated that although nutritional knowledge was good, the dietary intake was fair indicating nutritional status. Malnutrition was distributed across the cadres and age groups.

CONCLUSION

Optimum nutrition is important for health and maintenance of function of the body. Discrepancies in food behaviour, nutrient intake lead to malnutrition among police women. Empowerment of women with appropriate nutritional knowledge would help police women to followed balanced diet for maintenance of good health. But in the present investigation although the police women exhibited good knowledge scores, the diet quality was poor, indicating poor practices, resulting in malnutrition.

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