



Introduction

The metabolic syndrome is a cluster of cardiovascular risk factors. It is a high risk condition that can result in serious complications including type 2 diabetes and cardiovascular diseases.

The metabolic syndrome represents a growing health problem in Albania and its prevalence is alarmingly high among the adult population.

Therefore, there is an urgent need to for effective interventions to halt the increasing prevalence of metabolic syndrome and its complications.

The recognition and control of the metabolic syndrome represent a real challenge for all healthcare professionals in Albania, including pharmacists.

There is lack of information about the role of community pharmacists in the care of patients with metabolic syndrome.

Methods

We used a descriptive cross-sectional design.

The target population were 50 primary care nurses that worked in 10 primary Health care centers located in Northwestern Albania in the cities of Lezhe and Shkoder.

The data were collected over five weeks. (October-November 2015).

The goal of the current study was to describe KAB(knowledge, attitude, behaviors) related to Diabetes Mellitus type 2 risk factor reduction.

We used a random sampling technique stratified to nurses with different work experience who might have different level of KAB regarding to diabetes mellitus type 2 risk reduction.

Work experience could lead to underestimate or overestimate the average KAB .

Data analysis were collected using SPSS version 11.5 for Windows. Categorical data were performed using a chi-square test.

Table 1. Knowledge of Diabetes type 2 risk factors

| Risk factors | Total n (%) | P value |
|---|-------------|---------|
| Increased Total Cholesterol Level | 45 (90%) | .508 |
| Increased LDL-C level | 42 (84%) | .807 |
| Increased HDL-C level | 40 (80%) | .520 |
| Lack of physical activity | 47(94%) | .010 |
| Overweight/obese | 50(100%) | .650 |
| Smoking | 48 (96%) | .418 |
| Heavy alcohol consumption | 40(80%) | .309 |
| High salt intake | 45(90%) | .620 |
| High saturated fat intake | 47(94%) | .727 |
| Male over 45 year old | 39(78%) | .428 |
| Postmenopausal female | 38 (76 %) | .329 |
| Diabetes mellitus type 2 family history | 49(99.9%) | .276 |

Results

50 primary care nurses were randomly selected for participation.

As shown in **Table 1** more than 70 % of respondents knew most of the diabetes mellitus risk factors. However, less then 62 % of the respondents (**Table2**) could correctly answer questions about evidence-based recommendations for diabetes mellitus type 2 risk reduction.

The majority of the respondents had positive attitudes toward Diabetes mellitus risk reduction and lifestyle modification, and they believed that they were capable of providing health education for Diabetes mellitus type 2 prevention and treatment (**Table 3**)

| Positive attitude | Total N (%) | p-value |
|--|-------------|---------|
| Must quit smoking | 35(70%) | .42 |
| Can drink alcohol moderately (<30 g per day) | 44 (88%) | .510 |
| Knows own Blood Glucose | 48 (96 %) | .781 |
| Knows own blood pressure | 39 (78 %) | .028 |
| Nurses are capable of providing Health Education | 47 (94%) | .02 |

Objectives

The objective of this study was to develop a description's of nurses knowledge about, attitude towards, practice behaviors related to Diabetes Mellitus type 2 risk reduction.

We posed the following research questions:

1. What is the level of knowledge regarding Diabetes Mellitus type 2 risk factors and preventive care?
2. What are the attitudes toward Diabetes Mellitus type 2 risk factors reduction?
3. What do the nurses report as their practice behaviors regarding Diabetes Mellitus type 2 risk reduction education?

Table 2. Rate of correct responses about the target goals of risk reduction

| Target Goals | Total n (%) | P value |
|---|-------------|---------|
| Weight Control | | |
| How to calculate BMI | 20(40 %) | <0.01 |
| Overweight criteria in terms of BMI | 25(50 %) | 0.09 |
| Daily recommended salt intake (≤ 6g day) | 27 (54%) | .532 |
| Daily recommended fat and cholesterol intake | | |
| Dietary fat ≤ 30 % of total calories | 27 (54%) | .532 |
| Dietary saturated fat ≤ 10 % of total calories | 22(44%) | .435 |
| Cholesterol < 300 mg | 20 (40%) | .389 |
| Daily alcohol intake < 30 g of ethanol | 10 (20%) | .123 |
| Blood pressure control | | |
| Systolic blood pressure < 140 mmHg | 35 (70%) | .610 |
| Diastolic blood ressure < 90 mmHg | 39 (78%) | .689 |
| Systolic blood pressure < 130 mmHg for patients with HTN and DM | 23(46%) | .449 |
| Diastolic blood pressure < 80 mmHg for patients with HTN and DM | 22(44%) | .420 |
| Blood Glucose Control | | |
| Fasting Blood Glucose < 108 mg/dl | 18(36%) | .028 |
| 2 hours Post-Prandial Blood Glucose < 140 mg/dl | 17 (34%) | .27 |

Conclusions

1. Although these Albanian nurses were confident about providing health education on diabetes type 2 risk reduction and lifestyle modification, they lacked knowledge critical to providing guidance to individuals with or at risk for diabetes mellitus type 2.
2. More intensive and creative approaches to the education of nursing professionals regarding diabetes mellitus type 2 risk reduction are recommended.
3. However this is a small scale study and further investigation need to be done .

References

1. Institute of Medicine. Promoting Diabetes Health in the Developing World: A Critical Challenge to Achieve Global Health. Washington, DC: The National Academies Press; 2010.
2. Berra K., Miller N.H., Jennings C.J.; Nurse-based models for cardiovascular disease prevention: from research to clinical practice. *J Cardiovasc Nurs.* 2011;26:S46-S55.
3. Lanuza D.M., Davidson P.M., Dunbar S.B., et al; Preparing nurses for leadership roles in cardiovascular disease prevention. *J Cardiovasc Nurs.* 2011;26:S56-S63.

