



**Full Length Research Article**

**CORRELATION BETWEEN PATIENTS KNOWLEDGE AND PRACTICE MEAN PERCENT OF SCORES THROUGH HEALTH EDUCATION PROGRAM ON DIABETIC PATIENTS IN KHARTOUM STATE**

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**ABSTRACT**

**Background:** The study population were consisted of 150 non-insulin depended patients who were chosen randomly from two diabetic clinic centers in Khartoum state divided into two groups an intervention and control group (75 patients for each group).

**Objective:** The aim of the study is to evaluate effect of health education program on Patients Knowledge and Practice through health education program.

**Result:** the findings of our study showed that the correlation between Patients Knowledge and Practice mean percent of scores through health education program times, the correlation between each pair of program time is true and not by chance and it is statistically highly significance.

**Conclusion:** Health education is a very effective method to increase awareness of diabetic patients and minimized complications of diabetes. Health teaching should be a part of the nurse responsibilities and should be emphasized in the basic curriculum of nursing schools and even primary and secondary schools.

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**INTRODUCTION**

The society's most valuable resource is its people. By protecting and promoting the health of its members, the best interferes of society will be severed. The higher level of health in a population, the most likely that individuals will be productive. They can share in the responsibilities of family life and they can contribute to the wellbeing of the communities in which they live and the country as a whole. Health education is the way for achieving this, (Boyd *et al.*, 1998).

**Health Education is an Integral Part of Nursing Roles**

Nursing is a dynamic, therapeutic and educative process in meeting the health needs of society. Today education about preventive health practices and health promotion is considered an essential component of comprehensive health care. Education is also a mean of improving health status of the public, (Boyd *et al.*, 1998; Daniels, 2004).

**Definition of Health Education Program**

Health education is the process of providing learning experiences for the purpose of influencing knowledge,

practices and attitudes relating to health. It is the part of health care which concerned with promoting healthy behavior, (HMHC Project, 2001). In other words, health education is the instruction that addresses physical, mental, emotional and social dimensions of health; develop health knowledge, attitudes, and skills; and is tailored to each age level, (Maurer and Smith, 2005). Health educational program is a planned sequential program of experience that is designed to motivate people to maintain and improve their health, prevent disease, and reduce health related risk, (Maurer and Smith, 2005).

**Aim and Subjects of Health Education Program**

The aim of health education program is to make people will be able to achieve health by their own action and efforts and available resources and develop the sense of responsibility for their better health as individuals, members of families and communities and governments in additionally to the objectives of health education. They are informing into action, (WHO, 1997; HMHC Project, 2001; Daniels, 2004).

**Principles of Health Education**

To conduct health education, certain principles should be followed. They include motivating the learners a motivation is the key to learning it people benefit from an action, they will be encouraged to repeat that action.

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Fear is not a motivator, it destroys the learning process. Other principles are: helping learners to define and specify learning needs; encouraging the learning process by using all senses; assessing and alleviating learning difficulties among precipitants; conforming to beliefs and culture; creating a willing atmosphere for learning; reinforcing progress; having fun; giving feedback; presenting the message clearly; encouraging the active participation of the learners; avoiding prejudice and bias; deciding on priorities; objectives and actions, (Bastable, 1997; HMHC Project, 2001; Daniels, 2004).

Maurer and Smith, (2005) suggested three factors work in client health education. The first one is health education includes a variety of strategies, such as lecturing, modeling, or providing printed material, and all methods are effective in increasing skills or knowledge level. The second one is the individualization and the adult learner. Individual characteristics such as age, social status, cultural issues, and educational level influence teaching effectiveness and long-term health behavior so it should be put into consideration when health teaching and the educational program should be individualized to meet learner's needs. In addition, the health educator needs to assess the learner's learning-teaching style and other andragogy principles. Finally, the third factor is the support system. The presence of a peer group can enhance learning by providing encouragement to the learners. Additionally, teaching a supportive family instead of just one family member is more effective in achieving learning objectives and modifying behavior. For groups of community learners, special efforts to include culturally appropriate information and the use of culturally sensitive materials may enhance participation and learning.

## MATERIALS AND METHODS

This intervention study was carried out to evaluate the knowledge and practice of non-insulin dependent diabetes mellitus patients after implementation of health education program. The following variables are analyzed: patient's knowledge and patients practice.

### Ethical consideration

The aims of this study are fully explain to the patients and their consent to participate in this study is obtain. The questionnaire filled in the presence of patients. The result of biochemical shown and discussed with them.

## Statistical analysis

Data will be analyzed using SPSS program.

## RESULTS

shows the correlation between Patients Knowledge and Practice mean percent of scores through health education program times, the correlation between each pair of program time in the above table is true and not by chance and it is statistically highly significance. The table show also, knowledge at any time (Pre, Post and Follow) are dependent on the three times of program at the patients practice.

The correlation is high between Pre-Knowledge and Pre-Practice ( $r=0.99$  &  $p<0.001$ ), Post-Knowledge and Pre-Practice ( $r=0.991$  &  $p<0.001$ ), Pre-Knowledge and Post-knowledge ( $r=0.993$  &  $p<0.001$ ).

## DISCUSSION

The aim of this study is to develop instructional materials to help the diabetic patients to improve their knowledge and practices about diabetes. In order to accomplish this aim, the researcher followed the health education principles which emphasize the importance of assessing the patients' learn needs for health education. Tgba, (1999) said that the learning needs should be assessed, to diagnose the information and content which should be covered qualitatively and quantitatively. Findings of the present study demonstrate that the majority of both intervention and control groups are not practicing exercise. This result is in the same line with Heggy, (2000) who found that the patients were not making exercise regularly and this may be because; they do not know that exercise is important for their diabetic state, or they have no time to make exercise and most of them said that they are not going to make exercise.

As regards the knowledge of the two groups (intervention and control) about different aspects of diabetes, finding revealed that the majority of both groups had incorrect knowledge. This findings supported by, (Brown, 1999) who found that diabetic patients didn't always have the knowledge or ability to manage their own illness. Additionally this result similar to Akel and Hamedeh (1999) stated that patient with no knowledge about dietary control; exercise or foot care had poor self-care practices.

**Table 1. Correlation between Patients Knowledge and Practice mean percent of scores through health education program**

			Knowledge			Practice		
			Pre	Post	Follow	Pre	Post	Follow
Knowledge	Pre	R	1.00					
		P	-					
	Post	R	0.993	1.00				
		P	0.000*	-				
	Follow	R	0.641	0.653	1.00			
		P	0.000*	0.000*	-			
Practice	Pre	R	0.990	0.991	0.639	1.00		
		P	0.000*	0.000*	0.000*	-		
	Post	R	0.734	0.729	0.475	0.729	1.00	
		P	0.000*	0.000*	0.000*	0.000*	-	
	Follow	R	0.866	0.863	0.586	0.586	0.696	1.00
		P	0.000*	0.000*	0.000*	0.000*	0.000*	-

\*Statistically highly significant

R: correlation coefficient \* statistically highly significant (p-value <0.001)

Furthermore El-Hawashy, (1990) emphasized that most of diabetic patients missed some of the important health habits needed to control and manage their illness, and this due to poor knowledge or poor compliance. Data of the present study showed a significant improvement in the total knowledge of the intervention group after implementation of the program and six months later (follow up phase). A significant difference was detected between two groups (intervention and control). This result supported by Albert & Deal (1992), they have mentioned that when knowledge scores of almost all participants improve after program implementation, this indicated that the participants were highly interested in the program contents.

### Concussion and recommendations

Emphasize the importance of role of teachers and school nurse. Basic information about the diabetic coma should be included in the school teachers' training program, as well as the school nurses. Regular educational programs for diabetic patient should be carried out to acquaint them with the necessary knowledge and practice regarding diabetes mellitus and its care. Emphasize the importance of public awareness about the possibility of diabetic patient through TV and radio, and scientific programs.

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