

THE COPING STYLES OF ADOLESCENTS WITH TYPE 1 DIABETES

Jawad KA Al-Diwan MBChB, MSc

Abstract

Background: The importance of developmental prospective in understanding the variability in diabetic adolescent's coping efforts is underscored in Iraq.

Objective: This work was carried out to assess the association between the coping styles and higher level of perceived diabetes related worries.

Methods: 160 adolescents with type 1 diabetes were enrolled in this study from different diabetes centers in Baghdad city for the period 1st June to 21st Dec. 2000. Each participant interviewed individually. Full information including age, sex, and duration of diabetes, sport activity and visits to diabetic clinics and a diabetic related worries subscales were used. Coping styles (active and aggressive coping styles) were assessed by selected subscales. The influences

of coping styles and other variables on diabetic related worries were examined by stepwise regression analysis.

Results: Higher perception of diabetic related worry was significantly associated with active coping, aggressive coping, emotional support and sex. Age and visits to diabetic clinics were not associated with higher perceived diabetic related worry.

Conclusion: The finding demonstrated the importance of coping behavior to perceived diabetic worries, which in turn affects the metabolic control.

Key words: diabetic adolescents, coping styles, Iraq

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Introduction

Adolescents with type 1 diabetes faced with a complex set of developmental changes as well as changing demands of the disease^[1]. Coping skills are vital for emotional and social development among young people^[2]. Coping styles refers to typical and habitual preferences for way of approaching problems and might be regarded as strategies that people generally use to cope across stressors. Several studies showed that avoidance coping (refers to reduce emotional distress caused by stressful event and to manage and regulate emotions that might accompany stressors) in adolescents with type 1 diabetes predicts a poor illness specific self care behavior^[3-5]. The importance of developmental prospective in understanding the variability

in diabetic adolescent's coping efforts is underscored in Iraq.

This work was carried out to assess the association between the coping styles and higher level of perceived diabetes related worries.

Materials and methods

160 adolescents with type 1 diabetes were enrolled in this study from different diabetic centers (National Diabetic Center at Al-Yarmouk teaching hospital, Diabetic Consultancy Clinic at Al-Kadh.miya teaching hospital, Diabetic Consultancy Clinic at Al-Mansour teaching hospital and Diabetic Consultancy Clinic at Ibn Al-Beldy teaching hospital) in Baghdad city for the period 1st June to 21st Dec. 2000. Adolescence period is considered between 10 – 21 years^[6]. Their mean age was 15.1 ± 2.3 years; 53.8% of them were females; 51.3% of them had the disease for more than five years and 76.9% of them reported a history of a frequent hospitalization.

Each participant was interviewed individually. Full information including age,

Dept. Community Medicine, College of Medicine, Al-Anbar University

Address correspondence to Dr. Jawad K. Al-Diwan, P.O. Box 70017, Baghdad, e-mail: jawadkadhim@yahoo.com

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sex, and duration of illness, sport activity and visits to diabetic clinics were collected.

A diabetic related worries subscales was assessed^[7,8]. Diabetic related worry subscale was linearly transformed so that the worst and the best possible scores were zero and 100, respectively. Higher scores indicate lower perceived diabetes related worry.

To cover different coping styles relevant to the management of diabetes in adolescents, Active coping, seeking social support for instrumental reasons, seeking social support for emotional reasons, behavioral disengagement and mental disengagement were assessed by subscales selected from COPE scale developed by Carver et al^[9]. Aggressive coping was assessed by modified ways of coping questionnaires^[10]. Scores for assessing coping styles were computed as the mean score across items, yielding a scoring range of scale that correspondent with single item: zero (lowest possible use of each coping

style) through three (highest possible use of each coping style).

Internal consistency of diabetes related worry and coping styles was assessed by Cronbach's α score. The influence of coping style and other variables on diabetic related worries were examined by stepwise regression analyses^[11]. P value less than 0.05 was considered as statistically significant.

Results

Higher perception of diabetic related worry was significantly correlated with active coping, aggressive coping, emotional support and sex ($p < 0.05$). There was no significant association of higher perceptions of diabetic related worry with social support. Lower perception of diabetic related worry was significantly associated with aggressive coping and emotional support ($p < 0.05$). Age and visits to diabetic clinics were not associated with higher perceived diabetic related worry. These findings are shown in Table 1.

Table 1: Regression partial coefficient of diabetic related worry with the studied variables

Variable	Diabetic related worry	
	Partial coefficient	P value
Active coping	- 0.16	0.03
Aggressive coping	0.088	0.01
Emotional support	- 0.07	0.001
Social support	- 0.45	NS
Age	0.05	NS
Sex	- 0.2	0.001
Visit to diabetic clinic	- 0.1	NS

Discussion

An obvious lack of accurate informations on the exact magnitude of diabetes in Eastern Mediterranean Region was reported^[12]. Previous studies tend to focus on relationship between treatment related factors (poor adherence to insulin treatment and specifically mission shots) and poor metabolic control^[13,14]. However, others demonstrated that stress is a

significant risk factor for medical maladjustment^[15,16]. Since publication of Diabetes Control and Complication Trials (DCCT) results^[17], it has been widely accepted that improving metabolic control must be a fundamental priority in type 1 diabetes care. Improving patient's metabolic control was primarily to a combination of insulin management and psychosocial support provided by DCCT care team^[18].

This study revealed that higher perceived diabetic related worry showed a negative significant association with active coping (refers to efforts directed toward rational management of a problem and aimed to change the situation causing the stress) and a positive significant association with aggressive coping (avoidance coping and emotional focus coping such as behavioral and mental disengagement). This finding may be due to the fact that diabetic adolescents were struggling in the social-emotional and peer relationships areas of functioning which lead to emotional problems such as anxiety and depression. It is the maladaptive coping styles, which predict stress. Problem focus coping or active coping is generally associated with better adjustment^[19]. Avoidance coping (refers to reduce emotional stress caused by stressful situation and to manage and to regulate emotions that might accompany stressors) is associated with poor specific self-care behavior^[20]. Greater use of active coping (problem focus coping) was related to improved metabolic control and diabetic life satisfaction while aggressive coping was related to poor metabolic control^[16]. This finding indicated that anxious adolescents may be harder working in monitoring diabetes and may take actions that are more effective in response to signs of poor blood glucose.

Diabetic related worry was significantly associated with emotional support. It may refer to that diabetic adolescents cope with illness by ventilating feelings through shouting and arguing in family. The finding that social support had no role in reducing diabetic related worry may reflect a higher degree of self-blame among diabetic adolescents. Although self-blame might stimulate adolescent's responsibility taking^[16], too much self-blame might be linked to internalization of emotional problems^[21]. This finding may be due to parental perception of the adolescent's adjustment at school and level of social and emotional functioning with peers. In previous communication, the role

of peers in management of diabetes was demonstrated in Iraq^[22].

This study revealed, also, that diabetic related worry was significantly associated with sex. It is consistent with other reports^[22,23]. It may be due to general family factors such as warmth, cohesion and adaptability, which are the primary drivers for emotional instability. Source of stress for adolescent girls with diabetes include frequent changes in daily routines, academic challenges, interpersonal conflicts with family and peers, and societal messages regarding what is consider attractive contribute to adolescent's concern about their body image (when girls are becoming more concern about their body shape and size and particularly vulnerable to opinion of peers^[24], especially boys) may lead to intentional compromising in disease management^[22,25] (sever dietary indiscretion and repeated insulin omission) and eating disorders (anorexia nervosa, bulimia nervosa, excessive exercising and food deprivation). It seems that the situation in Iraq is different than in Western countries.

Recently, Wills et al^[26] reported that there are failing to achieve high standards of care for young adults with type 1 diabetes, a problem which likely to affect the entire United Kingdom. They demonstrated the need to learn from European centers that achieved better results. The dose adjustment for normal eating program (DAFNE) was a success in United Kingdom^[27].

In conclusion, the findings demonstrate the importance of coping behavior on perceived diabetic worries, which are in turn affect the metabolic control. Health promotion intervention in schools and others are important in helping the adolescents to better integrate challenges of the disease, and to adapt a more constructive behavior.

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