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A Quantitative Research on Self-management of Type 2 Diabetes

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Introduction

The self-management of type diabetes is an essential part of life for the patients with diabetes to have a better and a healthy lifestyle [1]. In addition, diabetes self-management is related to enhanced knowledge of diabetes, improved overall behaviour and discipline to adhere to diet and physical activity recommendations resulting in a better outcome [2,3]. Therefore, there is a need for all the required resources to be integrated in order to achieve the benefits associated with self-management. Wagner et al. provided a framework for integrating the resources and supports for self-management with key components of clinical care in a chronic care model [4].

The purpose of this short communication is to highlight the aims of this study which is using quantitative approach and methodology to determine the relationship between cultural beliefs and illness, social support in the population (40-60 years) of the rural area of Pakistan. This quantitative study explores how the health issue related to diabetes is viewed and addressed individually and within the rural communities in Pakistan, what factors affecting the self-management practices among the study population and examines how health professionals perceive the self-management approach of the patients and their specific behaviours [5,6].

The self-administered survey questionnaire was used for quantitative design which allowed us to get essential information such as demographic information about the participants and basic knowledge about the diabetes. Also, the illness beliefs, family and social support and self-management behaviours can also be measured using quantitative design approach. The data obtained from the survey questionnaire was analysed using IBM SPSS 24 software.

For the quantitative design, the revised version of the Summary of Diabetes Self-care Activities (SDSCA) developed by Toobert et al. was used to initially validate the Urdu-version of SDSCA and to measure the self-management activities of diabetic patients with smaller sample size (n=30) [7]. The SDSCA measure is a brief self-report questionnaire of diabetes self-management that includes items assessing the aspects of the diabetes regimen: general and specific diet, physical activity, adherence to medications and blood glucose monitoring. The results of Urdu-version of SDSCA are very promising as the instrument showed acceptable psychometric properties during its reliability and validity evaluation including: split-half reliability coefficient (0.90), test-retest reliability (r=0.918, p=<0.001) and intraclass coefficient (0.912).

In the internal consistency analysis of Urdu Instrument, for the 10 items of the U-SDSCA questionnaire, the Cronbach's alpha was 0.79. The scores for the sub-scale such as general diet was 0.85; for the exercise was 0.80; for blood glucose testing was 0.90, for foot care was 0.73 and for the medication adherence was 0.70. Interitem correlation was measured for the five domains using "Spearman's rank coefficient". General diet and blood glucose testing presented interitem correlation over 0.9 whereas exercise correlation was moderate and foot care and medication adherence correlation were average. All these results are in agreement with the English version of SDSCA, with the Arabic version of SDSCA and with the German version of SDSCA [7-9].

It was observed during the evaluation that the factor analysis was not possible to perform due to smaller sample size (n=30). The results obtained from the smaller sample may be unstable and may not be replicable [7]. It is envisaged that a larger sample will be used to do the factor analysis to obtain a good model to be used for future research in this area.

Finally, this quantitative research on self-management of type 2 diabetes will help to measure the association between illness and cultural beliefs, family and healthcare professional's support and self-management behaviours in the population of rural area of Pakistan. In addition, this research work will help to better understand the contextual determinant of behaviours which could facilitate the development of interventions reflecting the cultural needs by Integrating the other instruments such as the 9-item Brief Illness Perceptions Questionnaire (BIPQ) which measures illness beliefs, seven-item Resources and Supports for Self-Management Short Form (RSSM) scale and the Diabetes Family Support and Conflict (DFSC) scale which measures the extent to which participants will share their experiences of having support or conflict related to their diabetes within their families [10-12].

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