

## Diabetes-related knowledge, attitude and practices (KAP) of adult patients with type 2 diabetes mellitus in the Free State province, South Africa

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Unlike acute illnesses where patients are treated usually without their active participation,<sup>1</sup> diabetes care is complex and requires predominantly self-management.<sup>2</sup> Patients with diabetes and/or their families need to assume the major responsibility for managing their condition in order to achieve and maintain good glycaemic control and prevent complications.<sup>3</sup> Constant attention to diet, regular exercise/physical activity, glucose monitoring, compliance with medications and foot care are imperative in order to achieve good glycaemic control.<sup>2,3</sup>

Patients with diabetes need to be actively guided in learning about their disease and taught the necessary skills to adjust their behaviour to control their own health outcomes.<sup>4</sup> It is essential that they be empowered with knowledge and resources to enhance their individual participation in diabetes self-care.<sup>5-7</sup> To this end, le Roux and colleagues examined the knowledge, attitudes and practices (KAP) of 255 patients with type 2 diabetes mellitus (hereafter referred to as diabetes) receiving care at public healthcare facilities in the Free State, South Africa (le Roux et al, 2019).

In this cross-sectional quantitative study of predominantly lower socioeconomic status older women, the authors report overall negative attitudes, and poor knowledge and practices related to diabetes (le Roux et al, 2019). Despite the majority (93%) of participants with diabetes being aware that overweight worsened diabetes, 22% were overweight and an additional 65% were obese as defined by body mass index categories. Furthermore, while 91% of participants knew that regular exercise improved glucose control, a significant proportion (20%) admitted to doing no physical work or exercise in the previous week. The shortcomings regarding the translation of knowledge into action or practices may be related to poor attitudes towards diabetes and perhaps feelings of helplessness and inadequacy. Over 70% of participants felt that 'diabetes is the worst thing that has ever happened to me' among other negative sentiments expressed. Notably, this study found a significant association between knowledge and attitudes; improved knowledge about diabetes may be related to a more positive attitude towards the disease.

An in-depth qualitative exploration on the lack of correlation between knowledge and practice in this study would have added value and provided greater insights. For example, even though individual behaviour determines physical activity levels, there are multiple influences on health-related behaviours and conditions, including individual, community and public policy factors.<sup>8</sup> Therefore, physical activity is not simply a personal choice; it is influenced by the built environment, infrastructures for public transport, urbanisation patterns, safety issues, education on physical activity in childhood, and many other systemic factors that are not addressed in strategies focusing on individuals.<sup>9</sup> Environmental factors that prevent South Africans from participating in optimal physical activity include a lack of safety and high crime rates, and a lack of green areas and recreation facilities. Cultural beliefs and attitudes towards thin people also seem to contribute to low levels of physical activity among South Africans.<sup>8</sup> Additionally, the poor have fewer opportunities for physical activity and recreation.<sup>10</sup>

In addition to the opportunities for physical activity, healthy individual choices are easier to practice if supported by enabling environments such as easy access to healthy foods.<sup>11</sup> Access to, affordability, acceptability and awareness of unhealthy and processed food products are largely influenced by system factors such as national taxation policies, advertisements, global rules and ethics of marketing.<sup>9</sup> Without government intervention, it will be difficult to create an enabling environment for many lifestyle changes at the individual level, particularly for the disadvantaged in all societies.<sup>12</sup> Therefore, governments, including in South Africa, have a pivotal role in the fight against diabetes and other non-communicable diseases by developing appropriate policies and implementing strategies that influence the uptake of healthy lifestyles.<sup>13</sup>

Another limitation is that this study did not explore differences in KAP between men and women, likely because of the small number of men included. Diabetes management experiences have been reported to differ between men and women with regards to their beliefs, attitudes, fears and concerns about the disease.<sup>14</sup> For example, women may more often view

diabetes as negatively affecting their lives, fear diabetes-related complications, and may be prone to depression. Men, in contrast, may be more concerned that diabetes will inhibit their lifestyles but feel that it is controllable. These findings from international studies cannot be extrapolated to the local population; context and culture-specific research is needed to explore gender differences in diabetes KAP in South Africa.

Furthermore, it would have been interesting to evaluate the participants' KAP in accordance with their levels of glycaemic control; however, glycosylated haemoglobin (HbA1c) levels were not presented in this study. The direct correlation of improved glycaemic control with better KAP may have emphasised the close relationship between the two and the importance of incorporating and monitoring KAP in the holistic management of diabetes.

Nevertheless, this study highlights, in accordance with other research,<sup>15</sup> the need to not only empower patients with knowledge and education but also to improve attitudes, instil confidence, and provide support and motivation. There is a need to improve self-efficacy, problem-solving and coping skills.<sup>15,16</sup> Moreover, psychosocial stress has been reported to affect self-care behaviour with the ability to cope influencing glycaemic control.<sup>17</sup> The psychosocial and social barriers to diabetes self-care therefore need also to be addressed.<sup>2,15-17</sup>

The high prevalence and suboptimal control of diabetes in South Africa<sup>18</sup> warrants novel approaches to improve diabetes management in the country. The re-engineering of the South African primary healthcare system may be well-suited to improve diabetes care in communities. An essential part of the health system reformation includes the establishment of primary healthcare outreach teams led by community healthcare workers who will focus on improving health outcomes.<sup>19</sup> The widespread introduction of culturally relevant diabetes support programmes led by community healthcare workers in South Africa may be an innovative low-cost measure to optimise glycaemic control in this resource-constrained setting. However, more research is required to investigate the feasibility and cost-effectiveness of such a model of care in South Africa.

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