OBSERVATIONS

General Practitioners' Barriers to Physical Activity Negatively Influence Type 2 Diabetic Patients' Involvement in Regular Physical Activity

It is widely accepted that physical activity is a central component of type 2 diabetes management; HbA_{1c} can be lowered by 0.6–0.8%, independent of changes in BMI and fat mass (1,2). However, incorporating regular physical activity into type 2 diabetes patients' daily lives remains challenging. General practitioners (GPs) are cited as the primary source of information influencing healthy lifestyle decisions, but few studies have evaluated whether GPs' perceived barriers toward physical activity affect physical activity uptake in diabetes patients (3). The objective of this study was to assess the associations between GPs' perceived barriers to prescribing physical activity and type 2 diabetes patients' perceived barriers to adopting physical activity.

We conducted a cross-sectional study on GPs and their type 2 diabetes patients in the Auvergne region (France) through a self-administered questionnaire for physicians and their patients assessing their characteristics including physical activity and barriers to physical activity. The questionnaire, Barriers to Physical Activity in Diabetes (BAPAD), measures the perceived barriers to adopting regular physical activity by type 2 patients with diabetes or toward prescribing physical activity by GPs. GPs were asked to "[i]ndicate the likelihood that each of the 11 items would keep [them] from prescribing regular physical activity to [their] type 2 diabetes patients." Patients were asked to "[i]ndicate the likelihood that each of the 11 items would keep [them] from practicing regular physical activity." The mean of the 11 items (same 11 items for GPs and patients) gives the BAPAD score (4). Each GP was asked to enroll up to 10 patients with type 2 diabetes not treated with insulin. GPs first completed their questionnaire and then included patients, in the order of arrival, allowing patients to complete the questionnaire on their own.

The GPs overall response rate was low (<10%); 574 declined to participate and 84 agreed, but 36 were excluded from the analysis (no patient included or incomplete response to the questionnaire). Forty-eight GPs and 369 patients were included in the study.

Multivariate analysis using the patients' BAPAD scores as a continuous dependent variable and other patients' characteristics as independent covariates, showed that disease severity as assessed by HbA_{1c} (partial $r = 0.20$, $P = 0.0033$) and daily duration of physical activity (partial $r = -0.20$, $P = 0.0042$) were related to patients' BAPAD score. When the GP's characteristics were added to the patients' characteristics in the set of independent covariates, multivariate analysis showed that patients whose GP practiced regular physical activity had a lower BAPAD score (partial $r = -0.20$, $P = 0.0043$). Lastly, the GP's BAPAD score was directly correlated to the patient's BAPAD score (partial $r = 0.18$, $P = 0.0003$).

In conclusion, our findings suggest that modifiable factors, including GPs' physical activity and GPs' perceived barriers, are associated with type 2 diabetes patients' physical activity. It has been shown that endorsement of physical activity is more credible coming from a professional who practices physical activity (5). GPs should practice physical activity themselves, not only for their own benefit, but also as a stimulus for their patients. If this proves to be an effective strategy, identifying and working on GPs' barriers but also promoting physical activity in GPs may improve the uptake of physical activity in type 2 diabetes patients.

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References

1. Thomas DE, Elliott EJ, Naughton GA. Exercise for type 2 diabetes mellitus. Cochrane Database Syst Rev 2006;3:CD002968
2. Snowling NJ, Hopkins WG. Effects of different modes of exercise training on glucose control and risk factors for complications in type 2 diabetic patients: a meta-analysis. Diabetes Care 2006;29:2518–2527
3. Morrato EH, Hill JO, Wyatt HR, Ghushchyan V, Sullivan PW. Physical activity in U.S. adults with diabetes and at risk for developing diabetes, 2003. Diabetes Care 2007;30:203–209
4. Dubé MC, Valois P, Prud'homme D, Weisnagel SJ, Lavoie C. Physical activity barriers in diabetes: development and validation of a new scale. Diabetes Res Clin Pract 2006;72:20–27
5. Abramson S, Stein J, Schaufele M, Frates E, Rogan S. Personal exercise habits and counseling practices of primary care physicians: a national survey. Clin J Sport Med 2000;10:40–48

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