The diabetes-related attitudes of health care professionals and persons with diabetes in Argentina

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Objective. To test diabetes-related attitudes of health care team members (HCTMs) and people with diabetes in a developing country, in this case, Argentina.

Methods. The third version of the Diabetes Attitudes Scale (DAS-3) was randomly administered, in person, to 252 HCTMs (nurses, nutritionists, physicians, podiatrists, and social workers) and 279 people with type 1 or type 2 diabetes mellitus in several provinces of Argentina in 2004. Data from 531 completed questionnaires were included in the study. The data were statistically analyzed using analysis of variance, covariance, chi-square, and t-tests.

Results. Although few, the differences in attitudes of HCTMs and people with diabetes were significant. The two groups expressed only slight agreement on DAS-3 statements such as “seriousness of type 2 diabetes,” “value of tight control,” and “psychosocial impact of diabetes;” and disagreed completely on “patient autonomy.” No significant differences were recorded between people with type 1 or type 2 diabetes regarding “seriousness of the disease;” but from both groups, those individuals who had previously attended a diabetes education course assigned this statement a higher score (P < 0.01).

Conclusions. The unfavorable trend among the participants, similar to that recorded in developed countries, would contribute to the poor treatment outcomes observed in people with type 2 diabetes. Changing these attitudes by means of education could contribute to improving the quality of care and of life for people with diabetes and to decreasing the cost of the disease.

Diabetes mellitus; health knowledge, attitude, practice; patient care team; self care; Argentina.

Although the chronic complications of diabetes can be effectively prevented or delayed (1–4), most people with diabetes still suffer from them. Poor quality of diabetes care may be responsible for the disconnect between scientific knowledge and real world results. In fact, the quality of care frequently falls far short of the standards recommended by the American Diabetes Association (5) and what is considered “optimal” care in the United States of America (6), as well as in countries in Latin America (7). It has been shown that poor diabetes care is partly due to the prevalent, misguided attitudes of both health care providers and people with diabetes (8). Alternatively, patients who report high levels of adherence to diabetes care and control have more positive attitudes toward disease management (9). Since these conclusions were obtained mainly from studies in developed
countries, they could not be strictly applied to developing countries where the health scenario can be quite different. Therefore, a diabetes-related attitudes study in a developing country was needed. Based on this need and the assumption that the study would explain the poor results of diabetes treatment in Argentina (10) and help define appropriate strategies for overcoming the issues identified, we surveyed health care team members (HCTMs) and people with diabetes. The questionnaire employed for the survey was the third version of the Diabetes Attitudes Scale (DAS-3) (11).

MATERIALS AND METHODS

In 2003, the Diabetes Education Study Group of Argentina (DESGA) decided to evaluate diabetes-related attitudes of HCTMs and people with diabetes. Eleven of the 15 DESGA members, each with extensive experience in diabetes treatment and control and with numerous diabetes patients, participated in the study.

The evaluation tool, DAS-3, has improved internal reliability scores and is shorter than earlier versions, thus becoming a valid and reliable tool to measure diabetes-related attitudes. Further, it is suitable for performing comparisons across different groups, i.e. HCTM and/or people with diabetes. DAS-3 includes 33 statements that by different combinations are resolved into five discrete subscales, namely, attitude toward (1) need for special training to provide diabetes care, (2) seriousness of type 2 diabetes, (3) value of tight glucose control, (4) psychosocial impact of diabetes, and (5) patient autonomy. Each subscale is classified according to the following possible scores: strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. Consequently, while a score of 3 indicates almost no clear definition, values above or below represent agreement or disagreement with the corresponding statement of the subscale. DAS-3 was translated into Spanish, with the permission of Dr. Anderson, and validated in our population (Cronbach’s α-coefficient 0.987, unpublished3) before its implementation.

Eleven DESGA members personally and sequentially delivered approximately 50 DAS-3 questionnaires each to HCTMs and people with diabetes (simple access order), within their respective organizations, along with an explanation of the study aims. The completed surveys were collected, preserving the anonymity of those surveyed. Diabetes type was defined by the patient’s clinical records. Since members of the DESGA belong to different regions of the country and work in different health sectors (Public Health, Social Security, and Prepaid System), data were collected from all three health sectors.

From a total of 542 questionnaires distributed, 531 (98%) were collected from 252 HCTMs (46% physicians, 27% nurses, 12% nutritionists, 7% social workers, 3% podiatrists, 5% educators), and 279 people with diabetes. Thirty-two percent of the patients had type 1 diabetes and the remaining 68% had type 2 diabetes. This percentage does not correspond to the low values of people with type 1 diabetes described in the adult general population, however, similar figures to ours were found in diabetes-treated population databases (7, 12). This difference is due to the large number of people with type 2 diabetes who ignore their disease and to those who know it but do not receive any type of treatment, while the opposite situation occurs among people with type 1 diabetes (13). Thirty percent of the patients had previously attended structured, educational diabetes courses.

The data collected were statistically evaluated using ANOVA, covariance, and t-test.

RESULTS

Table 1 summarizes the characteristics of the population sample. Most HCTMs worked in the public sector and were physicians. The predominant form of diabetes was type 2.

Results of the survey (Table 2) are quite striking. Scales whose importance has strong reported evidence such as “seriousness of type 2 diabetes,” “value of tight control,” and “psychosocial impact of diabetes,” received only a slight agreement from the participants (borderline to the neutral level of 3); it was even worse for “patient autonomy.” In the case of “patient autonomy,” neither HCTMs nor people with diabetes considered it an important issue (score below neutral level of 3).

Although initially we conducted separate evaluations of the data collected from the different types of HCTMs, we finally analyzed all data together because no significant differences were recorded among those subgroups when comparing the different scale items. Conversely, when we analyzed the data collected from HCTMs in Argentina’s different health care sectors, professionals working in the public health sector generally had lower scores than those of the prepaid sector (P < 0.05).

We recorded no significant differences between people with type 1 or type 2 diabetes, but those who had previously attended diabetes education courses had higher scores regarding “seriousness of the disease” (P < 0.01). There were significant differences between HCTMs and people with diabetes at scales 1, 2, and 5. In the first two scales, HCTMs recorded higher score values, while the opposite occurred with “patient autonomy.”

DISCUSSION

Our results show that among the study population (HCTMs and people with diabetes in the different health care sectors of a developing country), attitudes toward different aspects of type 2 diabetes are not exactly the same. A similar difference was previously recorded by other authors and in different health settings using the DAS-1 (14) and DAS-3 (15). This statistical difference between the two groups would not have the same sig-
TABLE 1. Demographic characteristics of health care team members (HCTMs) and people with diabetes, Argentina, 2004

<table>
<thead>
<tr>
<th>Scale name</th>
<th>HCTMs</th>
<th>People with diabetes</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean ±SD)</td>
<td>Female (%)</td>
<td>Public sector (%)</td>
<td>Prepaid sector (%)</td>
</tr>
<tr>
<td>Physicians</td>
<td>42 ± 13</td>
<td>50</td>
<td>86</td>
</tr>
<tr>
<td>Nurses</td>
<td>43 ± 8</td>
<td>73</td>
<td>70</td>
</tr>
<tr>
<td>Nutritionists</td>
<td>40 ± 14</td>
<td>78</td>
<td>61</td>
</tr>
<tr>
<td>Social workers</td>
<td>40 ± 4</td>
<td>100</td>
<td>67</td>
</tr>
<tr>
<td>Podiatrists</td>
<td>48 ± 15</td>
<td>56</td>
<td>89</td>
</tr>
<tr>
<td>People with diabetes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 1</td>
<td>39 ± 17</td>
<td>55</td>
<td>–</td>
</tr>
<tr>
<td>Educated, type 1</td>
<td>38 ± 18</td>
<td>49</td>
<td>–</td>
</tr>
<tr>
<td>Type 2</td>
<td>58 ± 11</td>
<td>59</td>
<td>–</td>
</tr>
<tr>
<td>Educated, type 2</td>
<td>59 ± 9</td>
<td>68</td>
<td>–</td>
</tr>
</tbody>
</table>

Abbreviations: HCTMs, health care team members; educated, type 1, diabetes education course for type 1 diabetes; educated, type 2, diabetes education course for type 2 diabetes.

REFERENCES

RESUMEN

Objetivo. Analizar las actitudes relacionadas con la diabetes en los miembros del equipo de salud (MES) y en las personas con diabetes en un país en desarrollo, Argentina.

Métodos. Se administró de forma aleatoria la tercera versión de la Escala de Actitudes en la Diabetes (DAS-3) a 252 MES (enfermeras de uno de los mejores hospitales de la ciudad) y a 279 personas con diabetes mellitus tipos 1 o 2 en varias provincias de Argentina en 2004. Los datos de 531 cuestionarios respondidos se evaluaron mediante análisis de varianza y covarianza, y las pruebas de la f y la al cuadrado.

Resultados. Aunque pocas, las diferencias entre las actitudes de los MES y de las personas con diabetes fueron significativas. Los dos grupos mostraron solamente una ligera coincidencia en algunos aspectos del DAS-3, como “importancia de la diabetes tipo 2”, “el valor de un riguroso control” y “el impacto psicosocial de la diabetes” y difirieron totalmente en cuanto a “la autonomía del paciente”. No se encontraron diferencias significativas entre los pacientes con diabetes tipos 1 y 2 en cuanto a “importancia de la diabetes”, sin embargo, en ambos grupos las personas que habían asistido a algún curso educativo sobre diabetes le asignaron una mayor puntuación a este aspecto (P < 0,01).

Conclusions. La tendencia desfavorable encontrada en los participantes de este estudio, similar a la observada en otros países en desarrollo, puede haber contribuido a los insatisfactorios resultados del tratamiento en las personas con diabetes tipo 2. Cambiar estas actitudes mediante la educación puede ayudar a mejorar la calidad de la atención y de la vida de los diabéticos y a reducir los costos de esta enfermedad.