The psychosocial aspect of diabetes may be overlooked as healthcare professionals strive to help people with diabetes meet their glycaemic targets. Three new papers from the DAWN2 study present a timely reminder of the burden that diabetes can impose and how different factors can affect psychological outcomes.

The results of the first large multinational study of the psychosocial aspects of diabetes, the Diabetes Attitudes Wishes and Needs (DAWN) study, revealed that the condition has a negative impact upon psychosocial functioning. It affects wellbeing, leading to diabetes-related distress, which includes psychological isolation, problems in everyday living, family worries, financial problems, as well as concerns about weight and hypoglycaemia. Adherence to medication, diet, exercise, glucose testing and glycaemic control are all affected by the psychosocial dimension to diabetes.

Similar findings emerged from the second DAWN (DAWN2) study, conducted a decade later which, together with other studies that have explored specific aspects of psychosocial functioning and diabetes management, shows conclusively that diabetes imposes a burden on those with the condition. However, there are significant differences between countries in psychosocial outcomes and also in diabetes care, support and education.

A new report from DAWN2, led by Antonio Nicolucci of the Centre for Outcomes Research and Clinical Epidemiology, Pescara, Italy, addresses...
this issue by looking at how psychological, social, cultural and clinical characteristics relate to general, and diabetes-specific, quality of life and psychological wellbeing.

**Risk/protective factors & psychological outcomes**

The Nicolucci paper focuses upon people with Type 1 or Type 2 diabetes from 17 countries spread across four continents, with a group of 500 people from each country taking part. Participants completed a questionnaire containing the DAWN-validated questions. The four psychological outcomes investigated in this study were: wellbeing, quality of life, diabetes impact and diabetes-related distress.

The risk and protective factors were grouped into the following categories: diabetes duration, health status, healthcare access and utilisation, subjective burden of diabetes and social support.

Before controlling for potential risk and protective factors, the researchers found significant disparities among countries for each psychological outcome, the largest being for diabetes-related distress. Controlling for potential mediators reduced this variation for all outcomes, save quality of life. Thus, the between-country variation in the psychological outcomes can be attributed, at least partly, to the individual-level risk and protective factors considered.

Each risk or protective factor was significantly associated with one or more of the four psychological outcomes. Modifiable psychosocial risk or protective factors, such as healthcare access and social support, accounted for 3 to 19 per cent of between-participant variance in psychological outcomes. Meanwhile, disease, demographic, socio-economic and health factors accounted for a further 16 to 43 per cent variance.

**Diabetes burden**

The DAWN2 study has previously revealed that diabetes is associated with significant psychological burden in all participating countries, with high levels of diabetes-related distress, diminished wellbeing and quality of life. This new analysis aimed to identify the demographic, social and clinical factors associated with these psychological outcomes. It also aimed to discover whether the differences observed between countries can be explained by these mediators.

The analysis concluded that there are indeed significant associations between the psychological outcomes and all of the factors studied. This does partly explain the disparities in outcomes observed between countries. However, there are still significant differences between countries that are not accounted for by these factors, suggesting that additional, unmeasured factors may be coming into play. These could include differences between healthcare systems, cultural factors and differences in levels of social and economic development.

Some of the disease, demographic and socio-economic factors studied here are particularly worthy of note. For instance, longer diabetes duration is associated with better psychological outcomes, independent of age. This suggests that time and experience can ameliorate some of the negative impact of the condition. Female gender is associated with lower psychological wellbeing and higher levels of distress. Low education level was associated with lower quality of life. It is not clear how diabetes-specific the last two factors are, as female gender and low educational achievement are associated with worse psychological wellbeing in the general population.

The greater treatment burden, which generally meant insulin therapy, the worse the psychological outcomes, in both Type 1 and Type 2 diabetes. Perception of treatment was important, with those saying that diabetes interferes with normal life having worse scores across...
all the psychological outcomes. Indeed, this was among the strongest correlates of diabetes-related distress. Frequency and severity of hypoglycaemia was very important. Frequent hypos, with symptoms, were linked to higher diabetes impact and distress, as were severe hypos, which were also linked to lower quality of life. Meanwhile, worrying about having hypos was also strongly linked to diabetes-related distress.

The development of diabetes complications was linked to a decline in psychological wellbeing. It was also noted that those with depression were more likely to develop complications. This study could not determine causality here, but it is possible that those with poorer psychological outcomes are at greater risk of complications because of differences in self-management behaviour, such as adherence to diabetes medication.

As is seen in the general population, increasing weight was linked with worse quality of life in the DAWN2 participants. Worry about weight and dietary restrictions were similarly linked with poorer psychological outcomes. Finally, all of the DAWN surveys have shown that the discrimination arising from their condition remains a key issue for people with diabetes, with one in five saying that they have experienced it. However, the level of discrimination reported varies between countries.

**DIABETES AND THE FAMILY**

Previous research has shown that diabetes has an impact on family members. It can lead to increased burden and worry, distress and reduced emotional wellbeing. On the positive side, it can improve relationships and introduce healthy eating habits to the whole family. The DAWN2 study has supported these findings when it looked at diabetes from the family perspective.

In a new report, Katharina Kovacs Burns of the University of Alberta, Canada, and colleagues, analysed DAWN2 data for the factors associated with good and poor psychological outcomes for family members caring for an adult with diabetes. The focus was upon identifying risk factors for poor outcomes, which could be improved with appropriate care strategies.

Each of the 17 DAWN countries aimed to recruit 120 family members, which resulted in a final total sample of 2,057. Participants answered the DAWN questionnaire, modified for family members, and the results analysed. The majority (65 per cent) of participants were women, median age was 43, 41 per cent had a low level of education and 44 per cent were not working. The person with diabetes cared for was, most often, a parent (32 per cent) or a spouse/partner (26 per cent) and was a woman in 47 per cent of cases with a median age of 59 years. Over half were being treated with insulin and 40 per cent had had at least one severe hypo in the preceding 12 months.

**Family psychology**

Before controlling for potential mediators, there were significant between country differences in the five psychological outcomes (wellbeing, quality of life, diabetes impact, diabetes-related distress and diabetes burden). The largest differences were in diabetes burden, the smallest in wellbeing and diabetes impact. Controlling for the mediators reduced these variations except for wellbeing, which stayed the same, and diabetes burden, which actually increased. No single country of the 17 had consistently the worst or best outcomes.

The analysis showed that every factor examined was significantly associated with one or more of the five psychological outcomes, except for the gender of the person with diabetes. Outcomes tended to be worse for family members who were female, older, less educated, not working because of caring for the person with diabetes or who had other competing obligations. They also tended to be worse when the person being cared for was not a parent or spouse/partner, used injected diabetes medication or who had more frequent hypos, including severe hypos.

Other factors leading to worse psychological outcomes were believing the diabetes was more severe, worrying about hypos, being more involved in, or having more conflict over, diabetes care and feeling frustrated about helping the person with diabetes. More positive psychological outcomes were associated with receiving diabetes education, greater support from others and finding ways to help the person with diabetes.

**Supporting the family**

The findings of this study have important implications for healthcare professionals and others who support family members of adults with diabetes. There is clearly a need, where diabetes is creating a burden, to offer greater support to family members. This might be done through referral to appropriate educational programmes and greater involvement of family members in the management of diabetes. In conclusion, this analysis clarifies the factors linked to either good or poor psychological outcomes, which can help determine how best to support the family with an adult who has diabetes. The perceived negative consequences of the condition could be prevented, or ameliorated, with social support from the healthcare team and other resources.


Research has shown that diabetes can lead to increased burden and worry, distress and reduced emotional wellbeing.
Social support

Social support is crucially important in diabetes. Higher levels of social support are connected to better emotional adjustment and lower levels of stress. This study found that a large diabetes support network was linked to better psychological wellbeing and quality of life. The absence of such support was associated with worse psychological outcomes. Indeed, this was one of the strongest correlates of poor psychological wellbeing and negative diabetes impact.

Although a causal relationship between social support and improved diabetes management has not actually been established, the researchers suggest that a greater understanding of the role of social support is needed and intervention to fill any gaps in such support could be of great value.

Support from healthcare professionals may also have an impact on psychological outcomes. Diabetes education was associated with better psychological wellbeing, while lack of access to education was associated with worse psychological wellbeing. This does suggest that greater knowledge and empowerment improve psychological wellbeing. The correlation between psychological outcomes and the number of consultations depended upon the healthcare professional discipline. Those who saw their physician frequently had higher perceived impact and diabetes-related distress. But the opposite was seen with other healthcare professional visits.

This suggests there are some significant differences in the relationships between the person with diabetes and the various members of their diabetes team.

Conclusion

This study shows that there are important links between demographic, social and disease risk and protective factors and psychological outcomes in people with diabetes. These factors should help to identify those at risk of poor psychological outcomes as a first step to supporting them in managing the burden imposed by their condition.

HEALTHCARE PROFESSIONAL ATTITUDES TOWARDS PSYCHOLOGICAL SUPPORT IN DIABETES

In 2001, the DAWN study reported that there was insufficient care and support to meet the educational and psychosocial needs of people with diabetes. This led to a ‘Call to Action’ programme, advocating the development of evidence-based strategies to meet these needs, with support from healthcare professionals (HCPs). The initial reports from DAWN2 showed the ongoing burden of diabetes to those with the condition and their families. There are still gaps in provision of support. Many HCPs are keen to offer psychological care, but lack the training to do so. A new report from Richard Holt, University of Southampton, from DAWN2 explores the barriers and facilitators for HCPs in the provision of person-centred psychological care and self-management support. It also looks at the strategies used by HCPs to ensure the psychological wellbeing of people with diabetes.

A minimum of 280 HCPs were recruited from each of the 17 DAWN countries, with quotas for primary care physicians (120), specialist diabetologists and endocrinologists (80) and diabetes nurses and dietitians (80). A total of 4,785 HCPs completed the survey. They were asked whether they assessed depression and the impact of diabetes on their patients’ lives. They were also asked whether they provided psychological assessment and support and if they coordinated with mental health professionals.

Study findings

Significant variations between countries were noted for each of the psychological care strategies considered, the largest being for ‘assesses depression’ and ‘coordinates with mental health professionals’. These variations were not modified by controlling for potential mediators, except for ‘assesses depression’. The use of psychological care strategies, particularly the assessment of depression, was more pronounced when the HCPs were working as a team. Dietitians and nurses were less likely to assess depression. Primary care physicians were less likely to coordinate with mental health specialists than dietitians, diabetes specialists and nurses. HCPs at hospitals and community health centres were less likely to assess depression than colleagues in private practice, but more likely to coordinate with a mental health professional.

Most national and international guidelines on diabetes care do call for effective and timely psychological support for people with diabetes. This new study reveals deficiencies in provision and identifies factors that may contribute to the situation. Around 17 per cent of the people in the care of these HCPs had clinical depression and around one-third needed help in dealing with emotional issues. But, despite this burden, only half of people with diabetes were assessed for depression. Only half of HCPs routinely asked patients about their diabetes. This led to a ‘Call to Action’ programme, advocating the development of evidence-based strategies to meet these needs, with support from healthcare professionals (HCPs). The initial reports from DAWN2 showed the ongoing burden of diabetes to those with the condition and their families. There are still gaps in provision of support. Many HCPs are keen to offer psychological care, but lack the training to do so. A new report from Richard Holt, University of Southampton, from DAWN2 explores the barriers and facilitators for HCPs in the provision of person-centred psychological care and self-management support. It also looks at the strategies used by HCPs to ensure the psychological wellbeing of people with diabetes.

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More psychological support is needed

When it comes to comparison between countries, none performed well or poorly on all psychological strategies. This may reflect differences in healthcare systems and cultural influences. There were also differences between the professions, with primary care physicians being less likely than others to ask about how diabetes impacted the lives of their patients. It may be that, despite the growing emphasis on patient-centred care and communication, the wide range of concerns in primary care takes the focus away from diabetes. They may also lack ready access to mental health services or be unaware of them.

The findings of this new study show the need for integrated care pathways and inter-professional training to enhance the provision of psychological support in diabetes. There also needs to be more value and priority placed on psychological care in HCP education. Many of the participants did express a desire for more training in diabetes psychology so appropriate training programmes should be developed. While there is no hard proof that improved psychological care leads to better clinical outcomes, there is evidence of its improvement of quality of life of people with diabetes and their engagement with self-management.