Comment on van Duinkerken et al. Biopsychosocial factors associated with a current depressive episode in diabetes: the ELSA-Brasil study

We read with great interest the findings of a cross-sectional analysis of ELSA-Brasil data by Van Duinkerken et al. [1]. The results of this study confirm that there are numerous biological, psychological and social correlates of depressive episodes in people living with diabetes. The authors concluded that a current depressive episode in the presence of diabetes was related more to biological than to psychosocial factors, compared with the absence of diabetes. However, we have some concerns about the study design and the practical implications of the reported results.

Firstly, we question whether important factors related to psychological treatment or intervention and comorbidities were overlooked in variable selection for the constructed model. We
noticed that the model was missing several known correlates of depression and/or diabetes, namely: psychotropic medication use (despite the authors reporting on sample characteristics in terms of anti-depressant use in their Table 1) [2]; previous or current engagement in psychological intervention [3]; psychological comorbidities (including conditions other than depression) [4]; and other diabetes-related complications that may explain hospitalizations [5]. Inclusion of these key variables may have resulted in a model that more accurately reflects the unique contributions of each predictor and their influence on depression in diabetes. For example, examination of other diabetes-related complications as reasons for hospitalization could have impacted on the conclusions drawn, in terms of delineating psychiatric from diabetes-specific visits and thus clarifying the relationship between hospitalizations and depression for people with diabetes. The finding that 'hospitalization' was a significant predictor of depression for people without diabetes but not for people with diabetes raises further questions, including whether hospitalizations in the diabetes group were entirely diabetes-specific (e.g. due to an episode of severe hypoglycaemia or diabetic ketoacidosis) and/or whether an association between psychiatric hospitalizations and depressive episodes was masked for the diabetes group.

Secondly, it is concerning that there was no distinction between types of diabetes in this study, despite known biological, psychological and social differences between these conditions. It is well established that depression constitutes a major independent risk factor in the development of type 2 diabetes [6], while the same is probably not true for type 1 diabetes. Moreover, there is emerging evidence of the difference in clinical presentations or 'depression profiles' of type 1 and type 2 diabetes groups, whereby adults with type 1 diabetes present with traits of melancholia and anxiety, while adults with type 2 diabetes exhibit traits of atypical depression and alexithymia [7]. Given the different aetiologies and presentations of depression between type 1 and type 2 diabetes, any investigation of the biopsychosocial correlates of these conditions must examine each condition separately.

Finally, the clinical relevance and practical implications of the study findings deserve more thought. The authors concluded that the results supported the hypothesis that cardiometabolic processes play a more important role for depression in diabetes than in depression without diabetes. We believe this conclusion is lacking clarity as it does not describe the nature of this proposed role and does not provide specific guidance as to how such factors should be incorporated into diabetes care. Further, the finding that discrimination at work was a significant predictor of a current depressive episode in diabetes was particularly novel but not expanded upon, other than to suggest
that screening of psychosocial factors should occur. We believe further investigation is warranted into the specific types of discrimination or stigma that are related to depression in diabetes. While there was a generic recommendation of screening that focuses more strongly on psychological and social factors, it is still debated whether screening for depression in diabetes is useful [8], and assessment of psychopathology is not always welcomed by people with diabetes because of stigma and lack of faith in what mental health services they may (or may not) be offered.

In summary, the authors could have offered preliminary suggestions or some pragmatic guidance as to how the identified biopsychosocial factors could be addressed within diabetes care. We call for continued efforts to better understand the pathophysiology of depression in diabetes and more effective treatment strategies.

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References

