



## Type 2 Diabetes, Psychological Well-being, Depressive Symptoms and Diabetes Distress: Examining Their Co-occurrence in the REWINDER Study

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### Introduction:

- The ageing population has led to a rise in type 2 diabetes (T2DM), affecting over 3.5 million people in Italy.
- Diabetes distress and depressive symptoms can affect self-efficacy in diabetes management and clinical outcomes.
- **Psychological interventions can improve both glycaemic control and psychological well-being**, but are still rarely part of routine diabetes care.
- **Patient-Reported Outcome Measures (PROMs) complement clinical data** by capturing patients' perspectives and are **essential to tailor interventions**.

### Materials and Methods:

- The data presented are from the **REWINDER study, which integrates PROMs with clinical and administrative data to enhance diabetes care**.
- **Three PROMs** were used: PAID-5 for diabetes distress, PHQ-9 for depressive symptoms, and WHO-5 for psychological well-being.
- Data from **267 individuals with T2DM (aged 40–69)** enrolled at the **Diabetology Centre of Ravenna** were analysed.
- **Descriptive, correlational, and logistic regression analyses** were conducted to examine how glycaemic control relates to the psychological condition of individuals with type 2 diabetes.

### Results:



About **3 in 10 individuals** experienced **diabetes distress** (26.44%).



About **4 in 10 individuals** experienced **depressive symptoms** (35.41%).

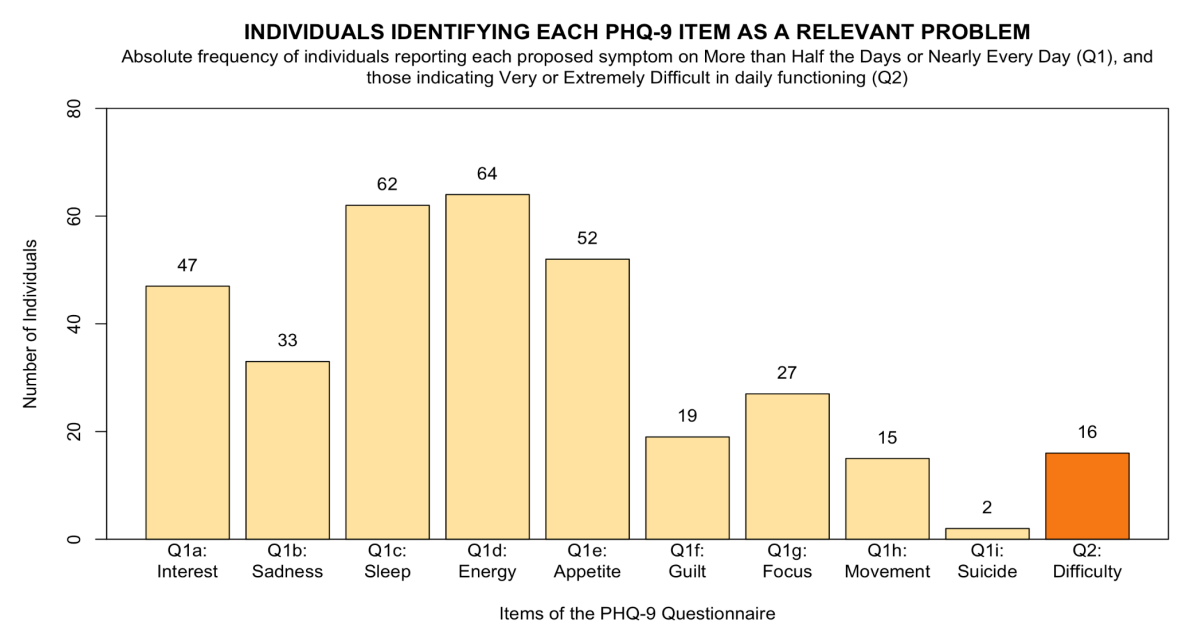
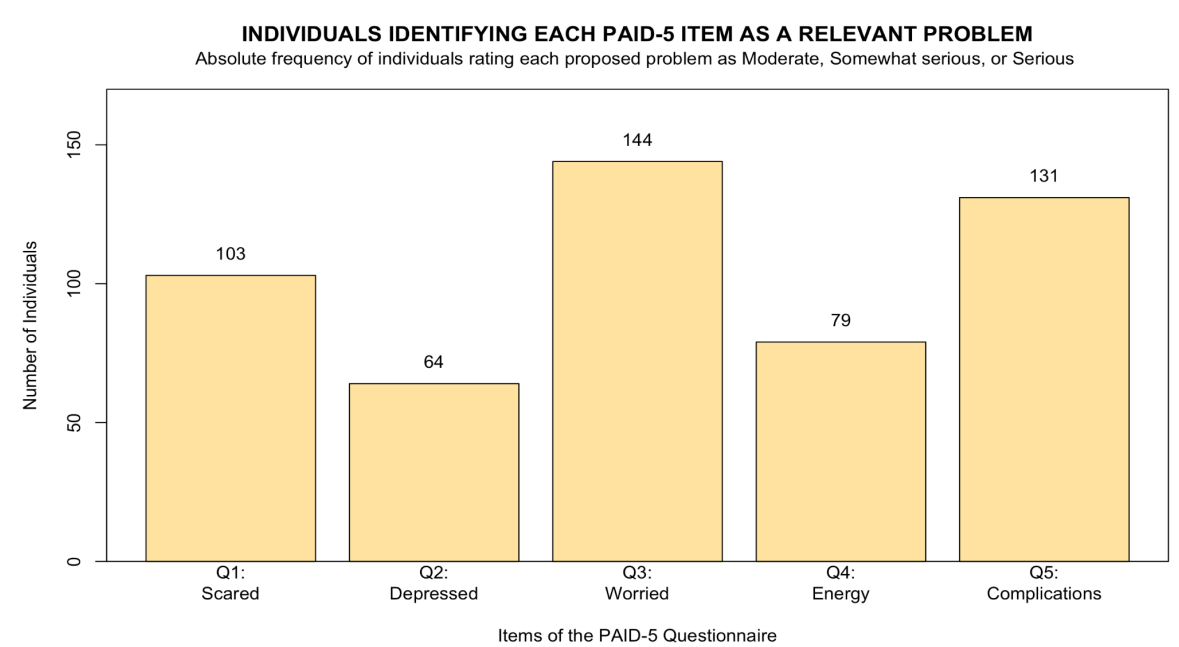
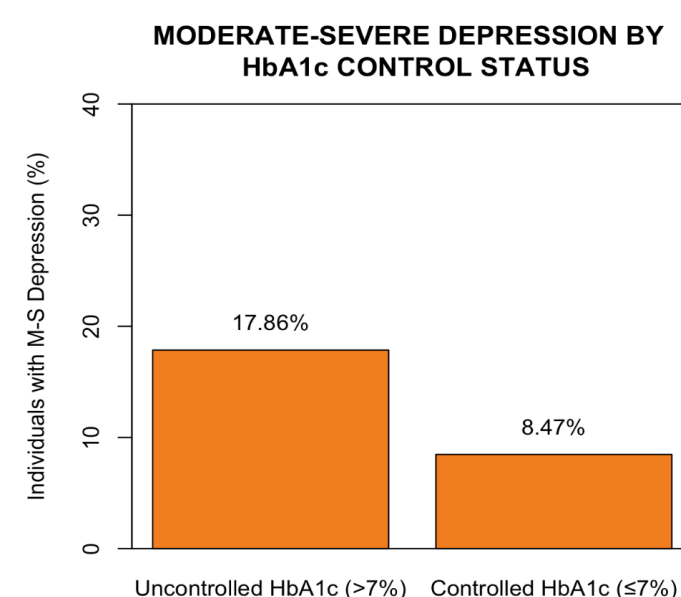
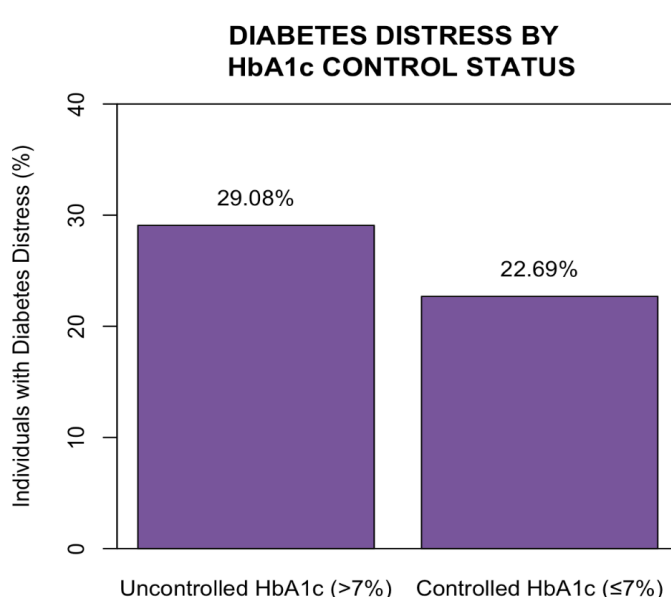


About **2 in 10 individuals** experienced **poor psychological well-being** (23.31%).



About **5 in 10 individuals** reported **uncontrolled HbA1c** (54.14%).

**PROMs scores were correlated:** PAID-5 and PHQ-9 showed a moderate positive correlation ( $r = 0.51$ ), while both were negatively correlated with WHO-5 ( $r = -0.50$  and  $r = -0.71$ , respectively).



### ⚠ Risk Factors for Moderate-Severe Depressive Symptoms

- **Diabetes Distress** → almost four times increased risk (OR = 3.57,  $p = 0.0015$ ).
- **Uncontrolled HbA1c (>7%)** → more than double increased risk (OR = 2.22,  $p = 0.0598$ ).

### Conclusion:

- **Diabetes distress and uncontrolled HbA1c emerged as the strongest risk factors for moderate-severe depressive symptoms.**
- Although the cross-sectional design of the study does not allow conclusions about causality between psychological and clinical factors, the **findings support the use of PROMs to screen for psychological vulnerability in diabetes care pathways.**
- **Routine use of PROMs in chronic disease management is essential to support timely, person-centred, and sustainable interventions, by helping to determine the most appropriate approach** - whether psychosocial interventions, psychotherapy, educational or psychological support.

### References:

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