CROSS-CULTURAL ADAPTATION AND VALIDATION OF *THE REVISED BRIEF DIABETES KNOWLEDGE TEST* (DKT2) IN INDIVIDUALS WITH TYPE 2 DIABETES MELLITUS AND THEIR CAREGIVERS.

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Background

- The **diabetes' knowledge** has a fundamental role in patients with Type 2 Diabetes Mellitus (T2DM) to performing appropriate <u>self-care behaviors.</u>

- The **DKT2 scale** contains two "subscales": the "*general knowledge*" subscale and the "*insulin-use specific knowledge*" that is appropriate for individuals using insulin.

- It is not available an Italian version of DKT2 scale.

Aim

To develop an Italian version of DKT2, providing a cultural and linguistic validation supported by <u>*psychometrics and hypotheses testing*</u>, in adults with T2DM and their caregivers.

Methods

- Sample _ 510 adults with T2DM and 251 caregivers
- Design and Statistical analysis _ **multi-phase multi-methods** study divided into:

  (a) *Cultural-linguistic validation*;

  (b) *Confirmatory Factor Analysis (CFA)*;

  (c) *Hypotheses testing:* comparing the DKT2' scores of adults with higher educational level *vs* DKT2' scores of those with lower education (in both patients and caregivers), and theorizing a positive correlation between knowledge (DKT2' scores) and <u>self-care self-efficacy</u>.

  The reliability was assessed by Cronbach's alpha and Kuder-Richardson Formula 20 (KR-20) of the overall scale.

Results

	Patients	Caregivers
Age	72.3 years (± 9.7)	62.9 years (± 12.6)
Sex	55% (male)	29% (male)
DKT2 total score	54.62% (± 19.23)	58.93% (± 18.68)

1) The **CFA** showed excellent goodness-of-fit after **removal of "item 4"** which was considered "outdated" considering its content, in both patients' group and caregivers' group.

Reliability was adequate as all Cronbach's alpha values in both groups and for both domains were higher than 0.65

2) Hypotheses Testing confirmed the validity of the Italian version of the DKT2 in both groups.

(a) Patients with an educational level lower than high school graduate had significantly lower scores (51.09% vs. 65.22%; $P <.01$), and there was a positive correlation between knowledge and _self-care self-efficacy_ ($P <.01$).

(b) Overlapping results were found in the caregivers' group: educational level lower than high school graduate had significantly lower scores (57.14% vs. 64.29%; $P <.01$), and there was a positive correlation between knowledge and self-care self-efficacy ($P <.01$).

Conclusion

The **Italian version of DKT2** shows evidence of reliability and validity, and it might be used by researchers, clinicians, and diabetes educators to assess a patient's or a population's overall knowledge of diabetes.