



Constrained by Instruments: How Quantitative Screening May Limit Exploration of Diabetic Patients' Lived Fear Experiences of Complications [Letter]

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Dear editor

Long-term diabetic complications, such as blindness and amputation, constitute major concerns among individuals with type 1 and type 2 diabetes mellitus (T1/2DM).¹ Evidence indicates that fear of these complications is a significant source of psychological distress, negatively affecting patients' mental health, quality of life, and even their partners' emotional well-being.² A deeper understanding of this fear is therefore clinically important. We appreciate the qualitative study by Xiao et al,³ which explored the fear experiences of complications and influencing factors in 16 patients with T2DM. While their work offers valuable insights for mental health nursing practice, we believe three methodological aspects warrant further discussion.

Predetermined Questionnaire Cutoffs and the Integrity of Qualitative Inquiry

In their study, Xiao et al utilized a cutoff score of ≥ 30 on the Chinese version of the Fear of Complications Questionnaire (FCQ) as an inclusion criterion,³ meaning that only T2DM patients who met this threshold were considered to have fear of diabetic complications and were eligible to participate in their qualitative interview. This approach raises two main concerns.

Failure to Recalibrate the Cutoff After Cross-Cultural Adaptation

The original FCQ, developed by Taylor et al,⁴ comprises 15 items, each scored from 0 ("no fear") to 3 ("greatest fear"), yielding a total score ranging from 0 to 45. Higher scores indicate greater fear severity, with a cutoff score of ≥ 30 denoting clinically significant fear.¹ However, as noted in the literature cited by the authors, the Chinese version of the FCQ omitted one item during transcultural adaptation, resulting in a 14-item scale with a maximum score of 42.⁵ Despite this structural modification, the authors retained the original cutoff of ≥ 30 without recalibration,³ calling into question the validity of this threshold in the adapted context.

Constraining Experiential Diversity and Depth Through Quantitative Preselection

More critically, the application of predetermined quantitative thresholds to screen participants might be fundamentally at odds with the core principles of qualitative study design. This practice compromises methodological integrity in two ways:

First, this method contravenes a central tenet of qualitative research: openness.⁶ Qualitative inquiry seeks to uncover diverse and unanticipated lived experiences.^{6,7} Preselecting participants based on FCQ scores imposes a predefined, metric-based conception of “fear”, determining whose experiences are deemed research-worthy. This creates two major limitations: (1) it confines findings to the FCQ’s predefined dimensions of fear, hindering the discovery of phenomena beyond its framework; (2) patients with distinctive and profound fear experiences who fall below the cutoff are systematically excluded. For example, a patient scoring below the cutoff may harbor intense, clinically and socio-economically significant fears in domains not captured by the FCQ—such as marital dissolution due to disease progression, loss of autonomy requiring long-term dependency, or social stigma and employment discrimination stemming from complications—each profoundly affecting daily functioning and social participation. Such nuanced and marginalized experiences, which qualitative research is uniquely positioned to illuminate, are filtered out by rigid quantitative criteria.

Second, this approach introduces substantial selection bias. The resulting sample represents not “T2DM patients with fear experiences” but rather “T2DM patients with FCQ scores ≥ 30 ”, thereby narrowing the representativeness and transferability of findings.

Consequently, the study engenders circular reasoning: while purporting to explore fear qualitatively, it operationalizes fear solely through the FCQ, potentially elaborating the instrument’s constructs rather than uncovering the broader phenomenology of fear.

Inadequacies in the Appropriateness and Application of the Theoretical Framework

Xiao et al claim their study was guided by the “Stress Coping Theory”,³ more accurately termed the “Transactional Model of Stress and Coping”.⁸ Its applicability to this research context, however, is insufficiently justified.

Limited Relevance of the Chosen Framework

The suitability of this framework for Xiao et al’s research topic is debatable.

First, the Transactional Model emphasizes responses to specific, present stressors that trigger cognitive appraisal.⁸ By contrast, fear of diabetic complications involves potential, uncertain, and future-oriented threats—characterized by ambiguity and chronicity (eg, “I might go blind”). Mishel’s Uncertainty in Illness Theory, which directly addresses psychological responses to illness-related ambiguity,^{9,10} however, aligns more closely with the “Sense of Uncertainty About the Disease” identified in Xiao et al’s findings, and offers a stronger theoretical basis for understanding how uncertainty generates fear.

Second, the Transactional Model was designed primarily for acute stress episodes,¹¹ with limited established relevance to chronic illness-related fears. By comparison, Dankert’s Fear of Progression Theory specifically conceptualizes fears of disease deterioration (eg, recurrence, metastasis, or new symptoms) in chronic conditions such as cancer, T1/2DM, or chronic arthritis,¹² offering a more tailored conceptual fit.

Taken together, integrating Uncertainty in Illness and Fear of Progression theories may offer a more comprehensive explanation of fear experiences in T1/2DM patients than the Transactional Model alone.

Weak Integration into Study Implementation

Even if the Transactional Model is adopted, Xiao et al still fail to adequately integrate its components into the research design, data collection, and analysis.

This model comprises three components: primary appraisal (evaluating the threat of a stressor), secondary appraisal (assessing coping resources), and coping.¹³ Yet, in Xiao et al’s interview guide, only one question—“When you have

emotions related to fear of diabetic complications, how do you deal with them?”—addresses coping.³ Questions targeting primary and secondary appraisal were absent. Additionally, as aforementioned, the model presupposes a clear and present stressor. In Xiao et al’s study, participants were T2DM patients without current complications, meaning the “stressor” (potential future complications) was uncertain. This makes operationalizing appraisal processes methodologically challenging.

A similar disconnect emerges in data analysis. Reported themes—“disease uncertainty”, “social support”, and “coping styles”—only partially align with the model and omit appraisal-related content. “Social support”, for instance, denotes external assistance but is not equivalent to secondary appraisal. Although the authors note in their *Discussion* section that illness uncertainty may affect appraisal and coping,¹⁴ their *Results* section presents no corresponding evidence. As a result, the study fails to leverage the explanatory capacity of the framework, limiting insights into mechanisms underlying fear.

Ideally, a continuous dialogue between data and theory—enriching or challenging the latter—is essential for theory-driven research. This process also requires balancing the guiding function of theory with the emergent nature of data to avoid premature theoretical categorization.

Inadequate Contextual Reporting and Threats to Data Quality

Transparency is essential to qualitative research best practices.¹⁵ Interview settings, privacy safeguards, and strategies to ensure a safe environment should be clearly reported. The COnsolidated criteria for REporting Qualitative research (COREQ) specifies such requirements, including “Item 14: Setting of Data Collection” and “Item 15: Presence of Nonparticipants”.¹⁶

However, Xiao et al merely stated that interviews took place in hospital wards, omitting critical contextual details.³ It remains unclear whether a private space was provided, whether non-participants (eg, family members, other patients, or medical staff) were present, whether interruptions occurred, or how non-verbal communication may have been affected in a disruptive ward setting. Such omissions impede interpretation, as prior research demonstrates that physical and psychological settings shape information disclosure, including the depth and authenticity of responses.^{17,18} This issue is especially pertinent when investigating sensitive emotions such as fear. In shared wards, participants may self-censor to avoid alarming relatives or social judgment, resulting in superficial or conservative accounts. Consequently, patients’ actual fear levels may be underestimated, thereby compromising data credibility, robustness, and transferability.

Conclusion and Recommendations

In summary, while Xiao et al’s study provides valuable insights into T2DM patients’ fear of complications, limitations in participant selection, theoretical alignment, and contextual reporting weaken its interpretive strength.

Future qualitative research should: (1) prioritize openness and inclusiveness in sampling to allow participants’ authentic experiences to emerge beyond predefined instrument constraints; (2) carefully select theoretical frameworks that align with the characteristics of the phenomenon under study and integrate them consistently throughout research design, data collection, and analysis to bridge the gap between data and theory; and (3) rigorously adhere to qualitative reporting guidelines, such as COREQ, to enhance methodological transparency and result credibility.

By improving methodological rigor in these aspects, subsequent studies can generate more comprehensive, reliable, and applicable evidence, thereby informing personalized psychological support for individuals with diabetes mellitus.

Abbreviations

COREQ, COnsolidated criteria for REporting Qualitative research; FCQ, Fear of Complications Questionnaire; T1/2DM, Type 1/2 Diabetes Mellitus.

Funding

No funding was received.

Disclosure

The authors declare no competing interests in this communication.

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