**Written description of patient reported outcome measure concepts included in checklist**

**Conceptual Model**

1. **Has the PRO construct to be measured been specifically defined?**

Yes,This study measures whether WHO QOL BREF can capture the patient reported QoL outcome in reference to Indian MDR-TB context or it may require some customization. As every disease condition is unique in itself in terms of affecting different spheres of QoL, a generic QoL tool like WHO QOL BREF is needed to be validated for a specific disease context.

1. **Has the intended respondent population been described?**

Yes, All microbiologically confirmed Multi-Drug Resistant TB patients who were above 17 years of age and registered in District Tuberculosis Centre (DTC) of Bhopal district in the four quarters of the calendar year 2017 were included for the research purpose.

1. **Does the conceptual model address whether a single scale or multiple subscales are expected?**

Yes , We measured the scale property for 26 items and in four domains separately both from IRT and classical test theory perspective

**Content Validity**

1. **Is there evidence that members of the respondent population were involved in the development of the PRO measure?**

NA

1. **Is there evidence that content experts were involved in development of the PRO measure?**

NA

1. **Is there a description of the methodology by which items/questions were derived?**

NA

Reliability

1. **Is there evidence that the reliability of the PRO measure was tested (e.g., test-retest, internal consistency)?**

Yes, The reliability of the tool was estimated using Cronbach’s alpha for each domain and for the instrument. Point and 95% CI values of Cronbach’s alpha were calculated using bootstrapping with 1000 iterations.

1. **Are reported indices of reliability adequate (e.g., ideal: r>=0.80; adequate r>=0.70; or lower if justified)?**

Yes, The global Cronbach’s alpha of the instrument was 0.94 ( 95%CI 0.92-0.96). The same was calculated for physical domain (0.85, 95%CI 0.78-0.90), psychological domain (0.88, 95%CI 0.83-0.91), social relationship domain (0.59, 95%CI 0.33-0.74) and for environmental health domain (0.89, 95%CI 0.85-0.92). Thus, apart from the social relationship domain, the interrelatedness of the items to measure the respective domains can be interpreted as reliable. However, the relatively higher values of global alpha may indicate the redundancy of some items.

**Construct Validity**

1. **Is there reported mathematical justification that a single scale or multiple subscales exist in the PRO measure (e.g., factor analysis, item response theory)?**

Yes,multiple subscales in the QoLmeasure were empirically demonstrate by both Rasch modelling( item response theory technique) and factor analysis (classical test theory).

1. **Is the PRO measure intended to measure change over time? If yes, is there evidence of both test-retest reliability and responsiveness to change? Otherwise, award 1 point if there is an explicit statement that PRO measure is NOT intended to measure change over time.**

We have performed a Differential Item Functioning (DIF) analysis as per the duration of treatment and as per the old or new patients in order to check the effect of time over patient reported QoL measures.

1. **Are there findings supporting expected correlations with existing PRO measures or other clinical data?**

Yes, We have attempted to converge and compare the various dimensions of the construct identified through both IRT and classical test theory and further to look into the items contributing more to the unfitting of the model.

1. **Are there findings supporting expected differences in scores between known groups?**

Yes, We performed a Differential Item Functioning (DIF) to check whether perceived QoL varies across gender, duration of treatment with category of patients (old /new) with same level of underlying trait.

**Scoring & Interpretation**

1. **Is there documentation how to score the PRO measure?**

The scoring approach is described in instrument description and in methodology section.

1. **Has a plan for managing and/or interpreting missing responses been described?**

NA, There were no missing responses in the study .

1. **Is there information provided on how to interpret the PRO measure scores?**

The operational definition for significant factor loading are described in methodology section .

Respondent Burden & Presentation

1. **Is time to complete reported and reasonable? If not, are number of questions appropriate for the intended application?**

Yes,This is mentioned in study design and in setting as- “The participants after giving written informed consent were interviewed during their scheduled visit to the center for medication. When participants could not visit the center during the scheduled time, they were contacted at their place of convenience by Senior Treatment Supervisor (STS)”.

1. **Is there a description of the literacy level of the PRO measure?**

Yes, The socio -cultural and socio -demographic characteristics of the participants are described in brief.

1. **Is the entire PRO measure available for public viewing?**

Yes , raw data is shared and link of repository is in public domain.