



Development and Validation of a questionnaire to measure a medical student's interest in the subject of Community Medicine

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INTRODUCTION:

- Interest develops in 4 phases¹.
- A tool which can indicate the interest level of a student is essential for designing educational interventions and measuring their effectiveness.
- No such tool exists for measuring a student's interest.
- **Objective:** To develop & validate a questionnaire to measure a student's interest in the subject of Community Medicine

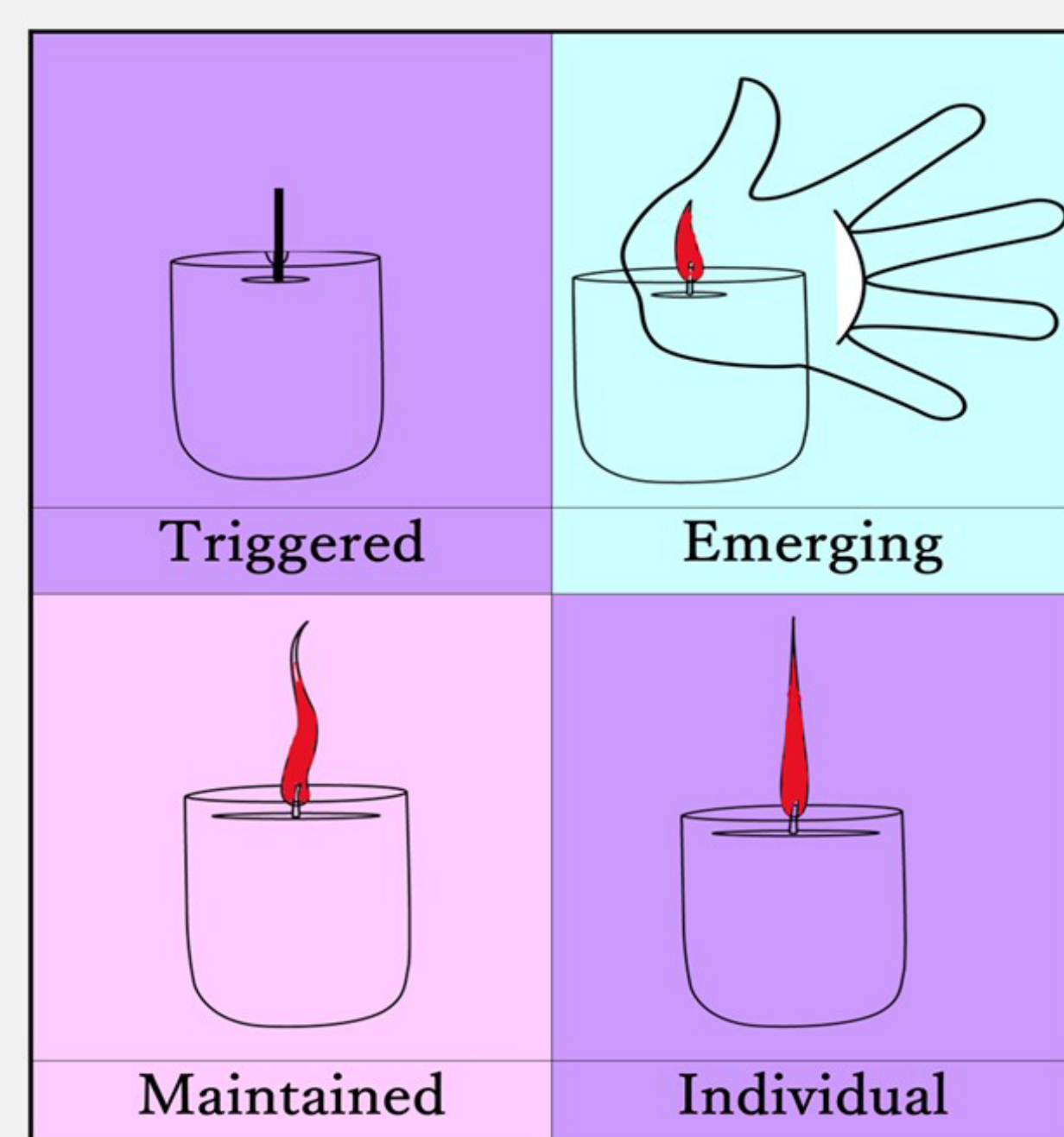


Figure-1: The four Phase model of Interest Development

METHODOLOGY:

- A cross-sectional study was carried out over a period of 1 year.
- The seven-step process of designing a high-quality questionnaire¹ was followed.
- **Reliability and Internal consistency-** Cronbach's alpha (0.75)

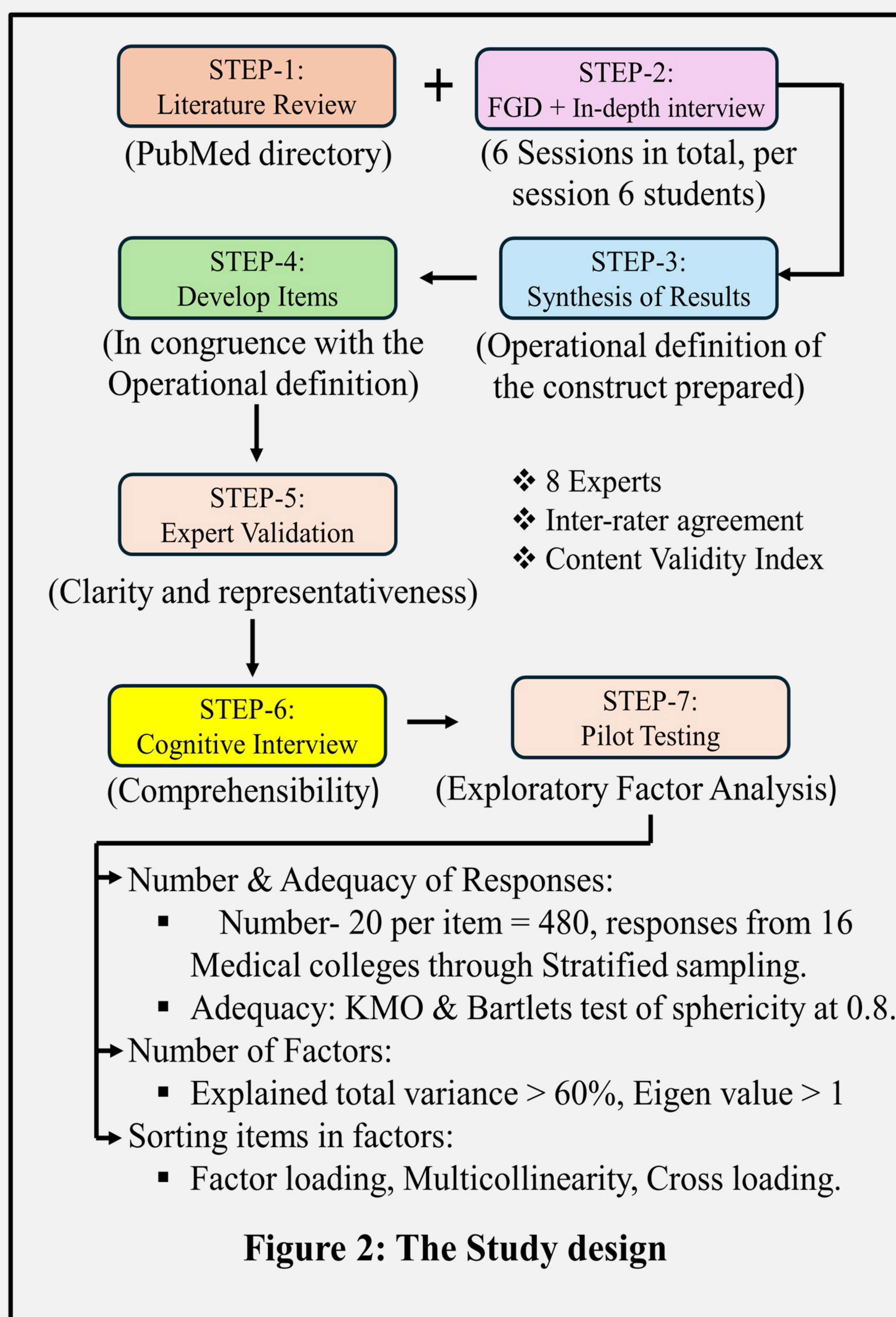


Figure 2: The Study design

RESULTS:

- **Item Synthesis:**
 - Based on the Operational Definition of the Construct
 - 25 Items were developed.
- **Content Validity:**
 - 3 Items were removed due to low Inter-Rater Agreement on Clarity (IRAC < 80%)
- **Construct Validity:**
 - Three rounds of Exploratory Factor Analysis were done.
 - **First Round**
 - 22 Items subjected
 - 4 Factors were identified
 - 1 Item was dropped due to cross loading.
 - **Second Round**
 - 21 Items subjected
 - 3 Factors were identified
 - 2 Items were dropped due to cross loading.
 - **Third Round**
 - 19 Items subjected
 - 3 Factors were identified.
 - Factor 1 (Emotions):
 - Represented by 7 items
 - Factor 2 (Reengagement)
 - Represented by 7 items
 - Factor 3 (Value)
 - Represented by 5 items

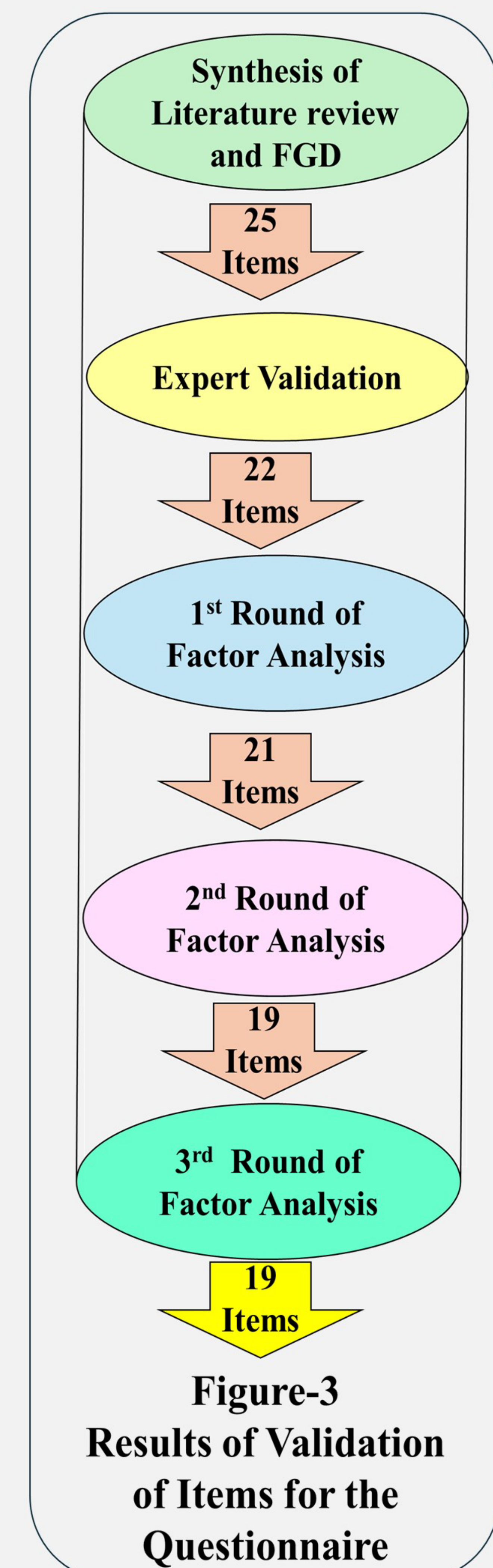


Figure-3 Results of Validation of Items for the Questionnaire

CONCLUSIONS:

- Interest in a subject is a multi-dimensional construct
- The construct was found to have three dimensions- Feelings, predisposition to reengagement and value towards the subject..
- A validated tool was developed through content and construct validity, to measure a student's interest in Community Medicine
- Possible uses of the Questionnaire:
 - In Cross-sectional studies: To measure the level of interest.
 - In longitudinal studies: A shift in scores within the reengagement and value domains of the questionnaire indicates that a learner is progressing to more advanced phases of interest. This insight allows teachers to adjust their teaching methods accordingly. For instance, they can employ techniques focused on applying knowledge rather than relying solely on instructional teaching methods

Acknowledgements:

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References:

1. Hidi S, Renninger KA. The four-phase model of interest development. *Educ Psychol* 2006; 41(2) : 111–127
2. Artino AR Jr, La Rochelle JS, Dezee KJ, Gehlbach H. Developing questionnaires for educational research: AMEE Guide No. 87. *Med Teach*. 2014;36(6):463-474. doi:10.3109/0142159X.2014.889814