Psychometric Evaluation of the Academic Goal Orientation Questionnaire

among medical sciences students of Saveh university of medical sciences.

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1 Introduction | Background and aim

Achievement goal orientation

Achievement goal orientation is a central construct in educational psychology: a coherent system of beliefs that shapes how learners interpret academic tasks, engage with learning activities and respond to success or failure.

It underpins students' motivation, influencing persistence, effort, emotional responses and overall learning behaviors, and therefore supports the central aim of any educational system: to cultivate motivated, purposeful and efficient learners.

Relevance to medical education: students must adapt to complex, dynamic learning environments and engage in sensitive, socially embedded professional interactions, which makes their goal orientations particularly important to understand.

Aim: to examine the multidimensional structure of academic achievement goal orientation and to evaluate the psychometric properties of the AGOQ among students at Saveh University of Medical Sciences.

2 Methods | Instrument, adaptation and validation

Instrument

16 items

4 dimensions

5-point Likert scale

The Academic Goal Orientation Questionnaire (AGOQ), developed by Skaalvik (1997), is scored from 1 (strongly disagree) to 5 (strongly agree) and covers four goal-orientation dimensions:

- **Ego self-frustration** — Concern about performing worse than others
- **Ego self-enhancement** — Striving to demonstrate superior ability
- **Work avoidance** — Minimizing effort and academic workload
- **Learning / task orientation** — Mastery, understanding and improvement

Translation and cultural adaptation — Beaton guidelines

1. **Forward translation** — Step 1
2. **Synthesis** — Step 2
3. **Back-translation** — Step 3
4. **Expert comparison** — Step 4

Validity and reliability — Evidence collected

1. **Face validity** — 40 students rated clarity, relevance, suitability, comprehensibility
2. **Content validity** — Expert panel; CVR and CVI calculated
3. **Reliability** — Cronbach's α and McDonald's ω
4. **Data analysis** — SPSS version 21

Expert panel: educational psychology, psychometrics, medical education, health education and public health.

3 Results | Evidence of validity and reliability

Face validity — Student evaluation

40 students

The translated questionnaire was administered to 40 students, who evaluated clarity, relevance, suitability and comprehensibility.

Impact scores (frequency % × importance) exceeded the acceptable threshold of 1.5 for all items.

Adequate face validity

Content validity — Expert panel judgement

CVR 0.70 – 1.00

0 Items judged essential 1.0

CVI 0.80 – 1.00

0 Items judged relevant 1.0

CVR ranged from 0.70 to 1.00, exceeding the minimum threshold: the panel judged the items essential.

CVI ranged from 0.80 to 1.00, showing strong item relevance.

Excellent content validity

Reliability — Internal consistency

0.89

overall scale

Cronbach's alpha (α) and McDonald's omega (ω) were both 0.89 for the overall scale, indicating strong reliability and consistent measurement across items.

α = 0.89 | ω = 0.89

4 Discussion | Interpretation and limits of the evidence

Principal findings. The translated, culturally adapted AGOQ showed adequate face validity, excellent content validity and strong internal consistency (α = ω = 0.89) in medical sciences students, with all items meeting the impact-score criterion.

Methodological strengths. Beaton's stepwise protocol and a multidisciplinary panel support conceptual, not merely linguistic, equivalence; concordance of α and ω strengthens the reliability estimate, since ω does not assume equal item loadings.

Educational relevance. Goal orientations shape persistence, effort and reactions to failure, which matters under heavy workload, high-stakes assessment and early clinical exposure. A valid measure enables early identification of students with dominant work-avoidance or ego self-frustration orientations for advising and tailored feedback, and shows whether the assessment climate fosters mastery goals.

Limitations and next steps: evidence at a glance

ESTABLISHED IN THIS STUDY

- Face validity
- Content validity
- Internal consistency

FUTURE RESEARCH PRIORITIES

- Factor structure (EFA/CFA)
- Test–retest reliability
- Predictive validity

5 Conclusion | Implications and future directions

The validated AGOQ is a practical, psychometrically robust tool for identifying students' dominant academic goal orientations.

- **Identify** — Detect each student's dominant goal orientation.
- **Plan** — Inform educational planning and learner-support strategies.
- **Intervene** — Promote adaptive learning goals and reduce work avoidance.

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