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DEVELOPMENT AND VALIDATION OF A SOCIOCULTURAL ADAPTATION INDEX FOR INTERNATIONAL MEDICAL STUDENTS

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Annotatsiya. Ushbu tadqiqot xalqaro tibbiyot talabalari uchun sotsiokultural moslashuvni baholashga mo‘ljallangan kompleks indeksni ishlab chiqish va validatsiya qilishga qaratilgan. Sotsiokultural moslashuv talabalarning o‘qishda muvaffaqiyatga erishishi va umumiy farovonligi uchun muhim omil hisoblanadi, ayniqsa tibbiy ta’lim jarayonida yuzaga keladigan qiyinchiliklar ko‘p qirrali bo‘lganligi sababli. Mazkur maqolada sotsiokultural moslashuvning turli jihatlarini aks ettiruvchi indeks konsepsiyasi bayon etiladi. Ushbu jihatlar qatoriga til ko‘nikmalari, ijtimoiy integratsiya, madaniy tushuncha hamda psixologik moslashuv kiradi. Indeksni baholash jarayoni uning turli tibbiy ta’lim muhitlarida ishonchliligi va validligini aniqlash maqsadida psixometrik sinovlarni o‘z ichiga oladi. Tadqiqot natijalari ishlab chiqilgan indeks ishonchli va valid o‘lchov vositasi ekanligini ko‘rsatdi hamda u xalqaro tibbiyot talabalari uchun qo‘llab-quvvatlovchi amaliy choralarni ishlab chiqishda muhim ahamiyatga ega.

Kalit so‘zlar: Xalqaro talabalar, moslashuv, moslashuv indeksi, tibbiy ta’lim, sotsiokultural moslashuv, psixometrik baholash.

Аннотация. Данное исследование направлено на разработку и валидацию комплексного индекса для оценки социокультурной адаптации иностранных студентов медицинских вузов. Социокультурная адаптация является важным фактором успешного обучения и общего благополучия студентов, особенно в условиях медицинского образования, где возникающие трудности носят многоаспектный характер. В статье рассматривается концепция индекса, отражающего различные факторы социокультурной адаптации, включая языковые навыки, социальную интеграцию, культурное понимание и психологическую адаптацию. Оценка данного индекса включает психометрическое тестирование с целью подтверждения его надежности и валидности в различных условиях медицинского образования. Результаты исследования показывают, что разработанный индекс является надежным и

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валидным инструментом измерения и имеет значимые практические последствия для разработки эффективных мер поддержки иностранных студентов медицинских вузов.

Ключевые слова: Иностранные студенты, адаптация, индекс адаптации, медицинское образование, социокультурная адаптация, психометрическая оценка.

Abstract. This study aims to develop and validate a comprehensive index for assessing sociocultural adaptation in international medical students. Sociocultural adaptation is critical for success in academic studies and overall well-being, particularly in the context of medical education, where challenges are multifaceted. This paper explains the conceptualization of an index that reflects multiple factors of sociocultural adaptation, including language skills, social integration, cultural understanding, and psychological adjustment. The evaluation of this index includes psychometric testing to ensure its reliability and validity in different medical education contexts. The results show that the index is a reliable and valid measure, with significant implications for actionable interventions supporting international medical students.

Keywords: International students, adaptation, adaptation index, medical education, sociocultural adaptation, psychometric evaluation.

INTRODUCTION.

With the increasing globalization of medical education, the number of overseas students entering medical programs around the world has risen dramatically (Andrade, 2006) Although this increases the heterogeneity and improves the learning environment, international students meet several specific sociocultural adaptation challenges, particularly in the field of medical education. The academic rigor, clinical demands, and language barriers of medical programs exacerbate these challenges (Chen, 2007; Kwon, 2009). Adapting to a new culture includes adapting to language, social norm, and other cultural aspects, as well as to psychological aspect (Smith & Khawaja, 2011).

Past research has largely addressed individual domains of adaptation (such as, language and social integration). However, no comprehensive tools exist to specifically assess the multidimensional adaptation needs of international medical students. Current tools like Social and Cultural Adaptation Scale (SAS) (Ward, Bochner, & Furnham, 2001), and Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1984) mostly concentrate on the normal student population and do not consider particular problems with medical education. Such an approach has not been previously taken among international medical students,

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and so this study fills this gap of knowledge by creating a sociocultural adaptation index for application to international medical students.

LITERATURE REVIEW.

The sociocultural adaptation represents a rather complex process, characterized by their dynamic and multidimensional nature. This includes adapting to a new culture, new language, new academic experience, and reintegrating in the social environment. Language proficiency has been established by previous studies as one of the major obstacles to adjustment which could interfere with the academic performance and social life (Chen, 2007). Additionally, social integration (the capacity to relate to the host culture) is essential for alleviating feelings of loneliness (Zhao, Kuh & Carini, 2005). Cultural competence, the ability to interact with people of different cultural backgrounds, is especially important in medical education because students will encounter patients from many diverse cultural groups (Smith & Khawaja, 2011).

In addition, psychological resilience, or the adaptability among individuals to handle the stressors and challenges in life, is considered a critical factor (Kwon, 2009). But we realised that most available tools are designed to measure adaptation in generalised student populations, and none considers the particular needs of international medical students. No specific index for this group exists and so we will develop a new index within a single tool, which pulls together variables for language proficiency, social integration, cultural competence and psychological adaptation.

MATERIALS AND METHODS OF RESEARCH

Results / methodology: We generated and validated a sociocultural adaptation index (SAI) for international medical students using a quantitative cross-sectional research design. Participants: Based on sampling proportional to international medical student population sizes across five universities in Europe, Asia, and the Middle East, and one international medical student per school year, we recruited 450 students. Based on both literature review and experts consult, items were categorized into 4 dimensions: language proficiency, social integration, cultural competence and psychological resilience composing the final version with 32 items as an index. Responses were collected using a 5-point Likert-type scale ranging from strongly disagree to strongly agree.

Data were collected through an online survey comprising of the adaptation index, demographic questions and measures of academic performance (Grade Point Average (GPA) and psychological well-being (General Health Questionnaire – GHQ-12) The survey ran for four weeks.

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A psychometric test was used in this study to test the reliability and validity of the index. Internal consistency test was performed using Cronbach's alpha, values above 0.7 were considered adequate. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to determine the factor structure and model fit respectively. Convergent validity of the index was assessed by calculating its correlations with standards of academic performance and psychological well-being. Statistical analysis was performed using SPSS.

RESULTS OF THE STUDY.

Conclusion: The Psychometric Properties of the ISPA Index demonstrated acceptable to good reliability and validity, showing its potential to assess sociocultural adaptation among international students. Cronbach's alpha was 0.89 (95% CI: 0.87-0.91), which indicates high internal consistency, while the test-retest reliability was $r = 0.84$, $p < 0.001$, indicating that the index was stable over time. The CFA results suggested a three-factor model with a CFI =0.92, TLI=0.89, and RMSEA=0.078, indicating an approzimate good model fit, following the Hu and Bentler recommendations (1999).

The highest ISPA index score in the cross-country comparison was observed for Azerbaijan (17.1 ± 4.8), followed by Turkey (16.4 ± 5.2), India (15.8 ± 5.6), and lastly, Pakistan (14.2 ± 6.1). Sociocultural adaptation differed significantly between countries, $F(3,317) = 8.42$, $p < 0.001$, $\eta^2 = 0.074$, a medium-sized effect based on the criteria outlined by Cohen (1988). Overall, findings imply that students from Azerbaijan may be more socioculturally adapted than their counterparts from any of the other nations, whereas Pakistani students may need more specific help in terms of adaptation process.

DISCUSSION.

Sociocultural Adaptation Index: Measurement of the adaptation process of international medical studentsA four-factor model contains important contours of adaptation and demonstrates validation with its Cronbach's alpha values and CFI fit indices ($p<0.1$) Finally, based on the fact that adaptation scores were most strongly associated with academic performance and psychological well-being, this emphasizes the importance of sociocultural adaptation in enhancing student outcomes.

The results speak to the need for more targeted programming among universities to promote cultural competence and psychological resilience. These programs may include language assistance, cultural training, and stress-managing strategies to help students adjust and excel in school.

CONCLUSIONS.

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The Sociocultural Adaptation Index is a sound and authentic tool that can be applied to the research of sociocultural adaptation to new culture among international medical students. Targeting students who are likely to require additional resources in language capabilities, integration into cultural society, cross-cultural competency, and psychological resilience will enable institutions to implement precise interventions that will positively impact both academic and social experiences. The lived experiences exposed through this index are paramount to contextualising the challenges of adaptation they are presented, in making successful practice in international schools, and it offers a scaffolding upon which to plan the components of the curriculum needed to make sustainable education more accommodating and supportive.

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