Assessing preparedness, attitudes, and knowledge of Knapp-UTRGV Family Medicine Residents on Geriatric nursing Home Care: Phase 1 - creation of interactive modules

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Background: Training in geriatrics and nursing home care are a critical element of medical education. This gap in knowledge becomes increasingly significant given the changing demographics and the need to provide adequate care for an aging population. Improving geriatrics curriculum and implementing nursing home rotations are essential to ensure optimal care for the elderly, thereby fulfilling both educational and healthcare imperatives.

Objective: We aim to analyze and assess the influence of geriatrics training through a survey to collect attitudes, skills, and knowledge of UTRGV Knapp Family Medicine residents. Additionally, the goal is to create interactive modules to boost their skills in this area.

Methods: We conducted a survey with established tools among Family Medicine residents at UTRGV's Knapp Residency Program. This survey sought to measure the residents' attitudes, skills, and knowledge about elderly care in nursing homes. The findings from this survey were used to develop interactive teaching modules to be included in the didactic curriculum. A subsequent survey was conducted to assess the impact of these interventions. Variables such as attitudes towards the elderly, self-perceived preparedness, clinical skills, the amount of geriatrics training, and plans for elderly care post-graduation were measured. Descriptive statistics and inferential were used. Attitude towards geriatric patient care (7 questions), preparedness for addressing common clinical issues (12 questions), and acquisition of clinical skills (11 questions). Additionally, a fourth domain focused on knowledge (15 questions) was analyzed through factor analysis with principal components and oblique rotation using Promax. The calculated score factors for each domain served as dependent variables (F1 to F3 for attitude, F1 and F2 for preparation, and F1 for skills), collectively explaining approximately 70% of the variance in the questions. A two-way ANOVA with additive effects, considering the year of residence and pre- and post-questionnaire responses, was employed as a covariate. Furthermore, knowledge was assessed as a score and through Item Response Theory for one parameter (IRT) to gauge question difficulty. The analysis was performed with Stata version 18.0.

Results: The 21 participants had residence categories: R1 n=6, R2 n=7 and R3 n =8. The experience of years of residence has an independent additive effect on geriatric syndromes (F1 of preparation, adjusted $R^2=0.38$, $p<0.001$), function and behavior (F2 of preparation, adjusted $R^2=0.27$, $p=0.002$), and acquired skills (F1 skills, $R^2=0.27$, $p<0.002$). Notably, no significant effect was identified in attitudes towards treating geriatric patients. Although there was no discernible impact on the overall knowledge score, IRT analysis indicated improved skills in answering specific questions, particularly among first-year residents. The study's limitations include small sample size, potentially affecting the power to detect subtle effects, and the fact that results from a single program may not apply broadly due to curricular and demographic differences.

Conclusion: In conclusion, our findings emphasize the positive influence of geriatric management training on family medicine residents' preparation, skills, and knowledge. While attitudes remained unchanged, the study stressed the importance of targeted interventions and ongoing research to enhance geriatric education.