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**Titolo tesi:** Self-employed nursing careers: increasing the knowledge of the undergraduate nursing students regarding the entrepreneurial, fiscal, regulation and pension aspects.

## ABSTRACT

**Background**:

Self-employed nursing careers are becoming increasingly important in the current labour market. Nevertheless, nurses in their undergraduate education are generally not trained to practice as freelance nurses. No valid scales for assessing nursing students' preparedness to undertake self-employed careers are available. Additionally, there is a paucity of evidence on the effectiveness of structured educational interventions in increasing preparedness for self-employed careers among nursing students.

**Aim**:

This doctoral study aimed to increase the knowledge of undergraduate nursing students regarding the entrepreneurial, fiscal, regulatory, and social security aspects of self-employed nursing careers. Thus, an inventory was developed and validated (aim a). Then, an educational program was created and delivered to a sample of Italian undergraduate nursing students to test its effectiveness in increasing preparedness for self-employed careers (aim b).

**Methods**:

The study employed a multi-method and multi-phase design for aim (a). Phase one, after literature and regulatory norm reviews, resulted in the creation of a two-scale inventory. The first scale, factors for determining the prices of activities, has two domains: care complexity (7 items) and logistic characteristics (3 items). The second scale, knowledge regarding freelance-related characteristics, has two domains: knowledge regarding administrative rules (12 items) and pensions and retirement issues (12 items). It included a methodological step for assessing the qualitative and quantitative content validity.

In phase two, a cross-sectional data collection was conducted to determine the psychometric properties of the developed scales and their reliability using cross-validation. The sample was randomly half-split to generate sub-sample A for performing an exploratory factor analysis (EFA) and sub-sample B for performing a confirmatory factor analysis (CFA).

For aim (b), an educational programme was structured to encompass each item of the inventory. It was delivered to 717 third-year nursing students with a pre-post design with convenience sampling. The inventory was administered before the structured education program was delivered (T0) to gather an initial assessment of students' preparedness for self-employed careers, and it was administered again after the delivery of the education program (T1) to test whether the structured educational programme improved the levels of preparedness for self-employed nursing careers.

**Results**:

For aim (a), the results regard Content validity and Psychometric proprieties and reliability. The inventory showed adequate validity and reliability. All CVRs (Content Validity Ratios) were 0.85 or higher for the first scale and 0.80 or higher for the second scale. KMO and Bartlett's test of sphericity was satisfactory (KMO = 0.814, $\chi^2(45)=1288.808$; P<0.001 for the first scale and KMO = 0.963, $\chi^2(276)=10,389.387$; P<0.001 for the second scale) and shows the suitability for factor analysis. The factor structure was found to fit the data well in both EFA (Exploratory Factor Analysis) and CFA (Confirmatory Factor Analysis), with RMSEA (Root Mean Square Error of Approximation) values within acceptable limits. Furthermore, the internal consistency showed Cronbach's $\alpha > 0.80$ in both EFA and CFA for both scales. The methodological phases confirmed adequate content validity, satisfactory dimensionality and reliability.

For aim (b), The most significant difference between pre- and post-test scores was in the domain of knowledge about pensions and retirement issues, followed by administrative rules knowledge. There were also substantial variations between pre- and post-test scores in both domains of the scale determining the price of a freelance nursing activity.

**Conclusions**:

The developed inventory showed initial validity and reliability, helpful in filling the gap given by the unavailability of valid assessments for educators who pursue measuring the nursing students' preparedness to undertake self-employed careers. The developed structured teaching programme positively enhanced the levels of awareness regarding factors for determining the prices of freelance activities, including both logistic and care aspects, and the knowledge concerning pensions and retirement issues and administrative rules to undertake a self-employ nursing career.