Abstract

Aim: This study describes the development and validation of the Nursing Profession Self-Efficacy Scale.

Background: Self-efficacy can be useful in predicting performance, job satisfaction or well-being. In the nursing field, there is a shortage of studies on self-efficacy in regard to a nurses' global confidence in coping ability across a range of everyday challenging work situations.

Methods: To define the theoretical framework of nursing professional self-efficacy, two focus groups and a literature review were performed. An empirical study was then conducted to test validity and reliability. Face and content validity, construct validity, concurrent validity, internal consistency and test-retest reliability were examined. The content validity index was evaluated by 12 experts who suggested deleting eleven redundant items. The final developed tool was tested for construct analysis using a cross-validation approach, randomly splitting the overall sample of 917 nurses in two sub-groups.

Findings: The construct validity indicated two dimensions. The face and content validity were adequate. Test-retest reliability displayed a good stability, and internal consistency (Cronbach's α) was acceptable. Moreover, concurrent validity using the Generalized Self-Efficacy Scale was in line with the theoretical framework.

Conclusion: The scale showed evidence of validity and reliability. The major limitation is the strong influence of the Italian context in the tool development.

Implications for Nursing and Health Policy: The Nursing Profession Self-Efficacy Scale could be a fruitful tool that facilitates the application of theories (i.e. social cognitive theory) in the nursing field and even development of interventions. Furthermore, a measurement of self-efficacy could be used to predict nursing clinical performance.

Keywords: Cross-validation; Empirical study; Italian; Nurses; Reliability; Self-efficacy; Self-perception; Validity.

Introduction

The nursing profession plays a very important role in achieving health outcomes (Aiken et al. 2014), contributing to welfare systems worldwide (Chan 2015). The role of the nursing profession stems from the consolidation of nurses' professional identity and competencies. Evidence shows that professionals' self-efficacy plays an important role in enhancing their outcomes (Schwarzer 1992) and the overall performance of professional practice (Judge 2001). There is a general agreement that professionals' self-efficacy is an important performance predictor (Cheraghi et al. 2009). Also, in the nursing field some studies have aimed to assess nurses' self-efficacy in different domains or particular situations, such as in an educational context (e.g. Stump et al. 2012) or regarding clinical performance (e.g. Cheraghi et al. 2009). Nevertheless, to the best of our knowledge there are no studies that have explored self-efficacy in regard to nurses' global confidence in coping ability across a range of challenging working situations encountered in nurses' typical work days.

Although some studies suggest most nurses hold favourable attitudes concerning their role in achieving health outcomes (e.g. Puhl et al. 2014), in different clinical fields nurses have expressed a lack of confidence (i.e. low self-efficacy) in their ability to manage or achieve sensitive outcomes concerning their functions (e.g. Zhu et al. 2013). For this reason, when nurses have low self-efficacy, their professional practices could fall below the evidence-based practice recommendations. For instance, when nurses have to educate their patients to improve one's self-care in chronic disease management (e.g. Ylimäki et al. 2015), the nurses' education intervention outcomes are relative to nurses' sense of self-efficacy to perform patient education. In other terms, nurses' self-efficacy represents a "can do" condition reflecting their sense of control or agency related to improved outcomes in their practice.

Self-efficacy plays a key role in the motivation process as well as outcome achievement. Regarding the motivation process, self-efficacy could either enhance or impede motivation (Scholz et al. 2002), while professionals with high self-efficacy levels choose to perform more challenging tasks (Bandura

1997), aspiring to higher goals. Self-efficacy could lead to professionals anticipating either an optimistic or a pessimistic scenario (i.e. high self-efficacy versus low self-efficacy) due to actions being pre-shaped in thought before acting (Scholz et al. 2002). Self-efficacy mediates the relationship between knowledge and action (Plaza 2002), which may impact outcomes.

Measurement of self-efficacy can be useful to predict nurses' motivation and outcomes as well. Although the literature offers some useful tools to measure nurses' self-efficacy regarding specific situations (e.g. Cheraghi et al. 2009; Stump et al. 2012; Zhu et al. 2013; Pisanti et al. 2015), tools involving nurses' global confidence in coping ability across a range of challenging typical work situations have not yet been developed. In most cases self-efficacy is understood as being domain-specific (Bandura 1977), but some researchers have also studied a general sense of self-efficacy defined as one's generalized confidence to cope with demanding situations (e.g. Skinner et al. 1988; Schwarzer 1995; Scholz et al. 2002). Hence, a nurse could have more or less self-efficacy in a specific situation, but it is conceivable to also have a broader sense of professional self-efficacy regarding dealing effectively with the most challenging work situations, where the highest level of this broad sense of self-efficacy is indicated by the professionals' optimistic belief in their ability to address novel and stressful situations.

Social cognitive theory

Self-efficacy is the perception of one's ability to successfully perform a task (Bandura 1997, 2001a) and represents one core construct of Bandura's social cognitive theory (Bandura 1977). Bandura's theory is a useful theoretical framework for understanding how determinants of human behaviour interact to explain actions (Bandura 1997). According to Bandura (1997), self-efficacy mediates the relationship between knowledge and behaviour and could make a difference in people's actions and thoughts.

For example, people with low self-efficacy could feed pessimistic thoughts about achieving their objectives due to their low self-esteem and sense of low competence to handle demanding tasks in

different settings. Hence, self-efficacy influences action and behaviour, and it influences the quality of decision-making, performance and academic achievements as well (Bandura 1997, 2001a). Conversely, people with high self-efficacy persevere in efforts toward success and achievement. Bandura (1997; 2001a) has identified several factors influencing self-efficacy: personal mastery, vicarious experience, symbolic experience and emotional arousal. Personal mastery refers to an internal attribution of success and the belief that success can generally be replicated using a winning behaviour. Vicarious experience is a social comparison process, referred to as experience acquisition. It happens when a person understands how successful people master a difficult situation, and thus it can enhance personal self-efficacy. Symbolic experience involves verbal persuasion by other people, such as when a nurse reassures a patient that he will certainly improve his health condition. Emotional arousal occurs in a stressful situation in which there is a feeling of being unable to master the situation. Some authors (Skinner et al. 1988; Schwarzer 1995; Scholz et al. 2002) conceptualize self-efficacy in a situation-specific manner or have studied a general self-efficacy including a broader confidence in coping with one's specific situation as well as coping with the most challenging working demands. A broader self-efficacy is yet subject to the context and research question (Scholz et al. 2002). If the research question deals with solving a clinical problem or drawing a blood sample, the wording of self-efficacy items will be narrower than when assessing the overall professional self-efficacy of nurses. In the nursing field there are valid situation-specific tools to assess different nurses' self-efficacies, but there are not tools to assess a broader professional self-efficacy that indicates nurses' global confidence to cope with their daily work challenges. Such a tool should be aimed at a wide and stable sense of personal competence to deal effectively with a variety of demanding situations. It might reflect a generalization across different professional situations where nurses judge how efficacious they could be. However, a broader self-efficacy measurement should also explain a wide range of behaviours and coping outcomes when the context is less specific and could be a worthwhile scale for future empirical research.

The purpose of this empirical study is to develop a scale to assess nursing professionals' self-efficacy that is sensitive and specific in an Italian nursing professional context and to assess the validity and reliability of that tool. The Italian nursing environment shares some similarities with the other European contexts, especially regarding undergraduate education since the Bologna Process had laid the foundation for a common European competence-based educational framework (Marchetti et al. 2015). However, there are some variations, especially in the ratio of nurses to physicians. Across EU member states, the average ratio is two-and-a-half nurses per physician, while in Italy there is evidence of an oversupply of physicians and undersupply of nurses, resulting in an inefficient allocation of resources since the ratio trends towards one to one (OECD/EU 2014).

The present study could have an important impact on management as it provides a tool to explore how confident nurses are to cope with their work challenges. Self-efficacy can be also used to predict nurses' clinical performance.

Method

This study was divided into two phases: phase one involved tool design, and phase two focused on psychometric testing.

Phase one: Tool design

Step 1

The first step of phase 1 was to create a definition of nursing profession self-efficacy that encompasses nurses' global confidence in coping ability across a range of challenging work situations that are typically faced by nurses in an Italian professional context. Between May and July of 2014, two focus groups were conducted with nurses coming from the Milan area (Gruppo San Donato Hospitals), involving eight nurses in each session (Barbour 2005). Participants were selected using purposive sampling to include nurses from different specialities, all with more than 5 years of experience in the same field. All participants had given their written consent to be involved in the focus group discussions and to be audio-recorded. The main question of each focus group was designed to determine which situations are most challenging in their everyday practice in order to create a foundation for the development of the Nursing Profession Self-Efficacy Scale. Each session was guided by an expert facilitator who started each session with the reading of some excerpts from nursing blogs to stimulate the debate. Every participant had the option to leave the discussion at any time and was assured of confidentiality. Each session was in Italian and lasted between 1.5 and 2 hours in length, including the opening readings, and were transcribed verbatim. To ensure anonymity, the transcriber used numbers rather than actual names of involved nurses.

Authors performed a content analysis (Vaismoradi et al. 2013) of the focus group transcripts to identify main themes that were operationalized into items to be included in the tool. Authors used the software Atlas.ti® to aid organization of data, providing codification and categorization as data reduction methods. Main themes were identified by selecting key quotes from focus discussions. The transcription was reviewed by every author; peer debriefing and member checking were performed to establish reliability (Creswell 2013). Two main themes were identified: 'tasks to ensure quality of

care' and 'tasks to ensure professionalism'. The focus group findings, including quotations, were translated from Italian to English, following the recommendations to achieve the best possible representation of the interpreted experiences of the participants (Van Nes et al. 2010).

Step 2

The second step of phase 1 was to generate the items, using findings from the focus groups and a broader literature review based upon a search in PubMed, Cinahl and Scopus as well as Italian nursing curriculum peculiarities, nursing textbooks and nursing blogs. For the database search, only papers concerning the Italian context by RC and FP were selected. The literature review provided more solidity to the focus group findings since the authors found a convergence of meanings. Thence, an initial item pool was developed and then revised multiple times during consensus discussion among the authors. The initial scale was composed of 30 Likert-format items on a scale from 0-100, according to Bandura's guide for constructing self-efficacy scales (Bandura 2001b). The response options ranged from 'completely no confidence' to 'complete confidence'. After many revisions, some items were removed as some of the nursing experts consulted to assess face validity found them unclear and repetitive. Thence, the final initial scale was composed of 19 items grouped into two sub-scales, including the attributes of patient care situations sub-scale (12 items) and the professional situations sub-scale (7 items).

Phase two: Psychometric testing

The validity and reliability of the Nursing Profession Self-Efficacy Scale was tested to ensure that the developed tool was a suitable instrument to measure nurses' self-efficacy.

Participants and setting

This study was conducted in three major hospitals, two in the Milan district and one in Rome, Italy. The final sample was composed of 917 nurses from the involved hospitals enrolled between

December 2014 and June 2015 who had correctly completed the questionnaire (917 nurses out of 1130 nurses invited, 81.15% of all filled questionnaires). A convenience sampling method was used.

Data analysis

As a preliminary analysis, descriptive statistics were performed for the demographic characteristics of the sample and items, including the skewness and kurtosis indices to ascertain normality. The Nursing Profession Self-Efficacy Scale was tested for face and content validity in the form of the content validity index (CVI) and concurrent validity. The construct validity was assessed through an exploratory factorial analysis (EFA) and a confirmatory factor analysis (CFA). A cross-validation approach was used, randomly splitting the sample into two sub-groups using the SPSS random split routine to select approximately 40% and 60% of study participants. The authors performed an EFA on the first sub-group (sub-group-A) and a CFA on the second sub-group (sub-group-B). The slight difference in the sampling splitting was to ensure more robust results for CFA performed in the larger sub-group (sub-group-B). EFA was performed using the maximum likelihood method where the analysis of the eigenvalues and the scree test were used for selecting the number of factors to be extracted. Items whose loading value was over 0.30 were kept. Before proceeding with the EFA, Bartlett's test and the Kaiser-Meyer-Olkin index were examined to assess the factorability of the correlation matrix. Cronbach's α coefficient was used to assess internal consistency, and the CFA on sub-group-B was used to cross-validate the most plausible factor structure model derived from EFA on sub-group-A. The following fit indices were considered to evaluate the CFA model: omnibus fit indices such as chi-square (χ^2), incremental fit indices such as the CFI (values > 0.95 indicated a good fit), the RMSEA (values < 0.06 indicated a good fit), and the weighted root mean square residual (WRMR; values 1.0 indicated a good fit). To determine stability, reliability was measured using the test-retest method. All statistics was calculated using SPSS 22 software (SPSS, Inc., Chicago, IL, USA) and Mplus 7.1 software.

Ethical considerations

Authors obtained approval from the Research & Ethical Committee of Policlinico San Donato (74/INT/2015), in full accordance with international ethical principles and Italian legal and research ethics requirements for non-interventional studies. All participants were informed about the aims and the method of the study, and they were asked to provide written informed consent, as required in the Italian Legislative Decree n. 196 of 30th June 2003. Participants were informed that participation was voluntary and they could withdraw or refuse to participate at any time without any consequences from the directors of the hospitals. Participants were also informed about the confidentiality of their responses and anonymity in data elaboration for the final report of the study.

Findings

Sample characteristics ($n = 917$)

The majority of nurses were female (69.4%). The mean age was 40.5 years (SD = 8.73), and ages ranged from 23 to 59 years. The mean number of years working as a nurse was 17.47 (SD = 10.15), with a range from 1 to 40 years. The length of working experience in the same ward, ranging from 1 to 29 years, had a mean of 8.51 years (SD = 6.98). The majority of nurses did not have a postgraduate education (57.1%). Moreover, 90.9% had a permanent contract, and 97.1% were employed full-time. The clinical areas in which the nurses worked were: (a) medical area = 28.6%; (b) surgical area = 17.9%; (c) critical area = 35.9%; (d) outpatient setting = 11.7%; and (e) other services = 6.0%.

Item descriptive statistics

The descriptive statistics of each item, including range, mean, standard deviation (SD), skewness and kurtosis are shown in Table 1. Since the Nursing Profession Self-Efficacy Scale items have a 5-point response format, they could be treated as continuous variables, considering also that the majority of the items have a skewness and kurtosis indices within |1|. The descriptive analysis indicated that while there was a tendency towards positive answering, the means of items were often not excessively high. Additionally, there was sufficient variance in the scoring, suggesting it is unlikely that participants were answering in a socially desirable way.

Validation

Face and content validity

The initial draft of the tool with the 30 items identified in the second step of phase 1 and grouped into two sub-scales was sent to 12 nursing experts in the form of CVI. Their evaluation was based on a 4-point Likert scale (1 = not relevant; 2 somewhat relevant; 3 = quite relevant; 4 = very relevant). The experts had also to answer three open-ended questions designed to explore the clarity of the items, the pertinence of the two sub-scales, and to suggest eventual additional items. CVI was calculated for item evaluation. Eleven items were deleted as their relevance was below 0.75, indicating redundancy with other items in the same scale (Wilson et al. 2012). In response to the experts' suggestions, the

authors also performed some wording revisions. Excluding the eleven redundant items, the mean of CVI was acceptable at 0.87 (SD = 0.13).

The draft with 19 items was checked for face validity by another group of 5 experienced nurses, and the authors revised the items according to their feedback. The feedback in this case focused on wording revisions and eliminating ambiguous or repetitive words. Hence, the final wording revision was performed by authors. The final version of the Nursing Profession Self-Efficacy Scale is composed of 19 items, grouped in two sub-scales: the attributes of caring situations sub-scale (12 items) and the professional situations sub-scale (7 items).

Construct validity

EFA was performed in sub-group-A (n = 360), the Bartlett test of sphericity was significant (χ^2= 6420.3, df = 141, p < 0.01) and the Kaiser–Meyer–Olkin test result was 0.92. Given these results, the correlation matrix was considered suitable for the factor analysis. EFA using the maximum likelihood method with Promax rotation was performed to examine the dimensionality of the new scale. In line with our hypothesis the analysis of the eigenvalues suggested the extraction of two dimensions. These factors, after rotation, explained respectively 19.8% and 14.3% of the common variance, or 34.1% overall. Factor loadings (Table 2) were all greater than 0.30. These results suggest the two-dimensional model was the one best suited to be cross-validated with CFA.

CFA was performed on the sub-group-B (n = 557), and the findings confirmed the appropriateness of the two-dimensional model with a satisfactory fit to the data, χ^2 (92, n = 557) = 183.47, p < 0.01; CFI = 0.90; NNFI = 0.86; RMSEA = 0.059 (90% CI = 0.037–0.069), p = 0.06; WRMR = 1.00, and with all loadings higher than 0.44 (Table 2). This model solution accounted for 49.3% of the total variance.

Concurrent validity

The Generalized Self-Efficacy Scale (GSE) developed by Schwarzer & Jerusalem (1995) was used to test the concurrent validity. The GSE uses a 4-point Likert scale with 10 items, and its validity and reliability have been studied in 33 different languages (e.g. Scholz et al. 2002), using CFA to assess construct validity. CFA of GSE showed one dimension, confirming the theoretical framework of Schwarzer (1995). Cronbach's α was good for each different linguistic version of GSE (> 0.85), considering the Italian version GSE also had a good internal consistency with α = 0.89 (Scholz et al. 2002).

The GSE and the Nursing Profession Self-Efficacy Scale were administered at the same time to the whole sample, but the GSE's return rate was lower than that of the Nursing Profession Self-Efficacy Scale; nevertheless it resulted in a significant sample (i.e. 59.56%, $n = 673$). The Pearson product-moment correlation was used to evaluate the relationship between these two scales, and the results revealed a significant and high positive correlation (r = 0.63; p < 0.001).

Reliability

Reliability coefficients concerning internal consistency were evaluated after CFA on sub-group-B to assess whether the items of each sub-scale measured the same construct. As shown in Table 3, the Cronbach's α of the attributes of caring situations sub-scale (12 items) was 0.86, and that of the professional situations sub-scale (7 items) was 0.84, both considered acceptable due to being above the threshold of 0.80 (Bland 1997). Even considering the overall tool, the Cronbach's α was 0.83.

The test-retest method was used to assess stability. A small number of nurses ($n = 20$) were asked to complete the questionnaire again after approximately two weeks had passed. The authors had the opportunity to perform the test-retest due to a code identification of the nurses invited to re-complete the questionnaire, in order to detect the first and the second measurements. The response rate for the test-retest was 100%. The scores had a normal distribution, as showed by a Kolmogorov-Smirnov test. The Pearson's correlation coefficient between the two measurements was 0.92 (P < 0.001).

Discussion

The purpose of this study was to develop and validate a tool to measure professional self-efficacy of nurses. The theoretical framework of this empirical study was based on the work of Bandura (1977). Nurses from three different Italian hospitals were included using convenience sampling to test psychometric validity. The broader research question concerns how the context may have influenced the tool development and results (Scholz et al. 2002). For instance, if a researcher wants to study nurses' perception of their competence to draw a blood sample (i.e. blood sampling self-efficacy), a narrow item pool is needed, and this self-efficacy will be probably little influenced by the context. However, if a researcher wants to study nurses' overall sense of competence, a broader exploration is needed, and this self-efficacy will probably be more influenced by the context.

For this reason, the Nursing Profession Self-Efficacy Scale was developed starting from an Italian professional context, even if the item pool was generated considering both the focus group findings and a broader literature review (i.e. Phase 1, step 2). The Italian nursing context shares some similarities with the other European contexts, especially regarding undergraduate education since the Bologna Process helped to create a European Higher Education Area (EHEA) capable of generating academic quality, economic development and social cohesion (Marchetti et al. 2015). However, some Italian context peculiarities (e.g. nurse-to-physician ratio ≈ 1: 1; lack of a clear definition of core nursing skills) make the developed tool specific and sensitive for the Italian context. Overall, the drafted items were intended to explore the most challenging situations that might arise in a typical work day, and the focus group findings helped to identify two major themes: attributes of caring situations and professional situations.

Content validity was important for the Nursing Profession Self-Efficacy Scale in order to ensure congruence between the research purpose and the developed tool (Burns 2005). The judgment and feedback of the experts who were invited to assess both content and face validity showed a high degree of agreement (mean $= 0.87$; SD $= 0.13$). Indeed, assessment of face validity provided useful wording revisions for the final tool with 19 items grouped into 2 sub-scales based on the focus group

findings and literature review: attributes of caring situations sub-scale (12 items) and the professional situations sub-scale (7 items).

According to the focus group findings, EFA on sub-group-A extracting 2 factors with a Promax rotation was a valid model, explaining 34.1% of extracted variance. Burn (2005) has suggested that the sample size needed to perform an EFA is 5 to 10 participants per variable to ensure a sufficient stability for psychometric testing. The sub-group-A (n = 360) was much larger than this minimum requirement; thus our EFA model is adequate for analysis. All the factor loadings (Table 1) were over 0.30, meaning there were no items requiring deletion or modification. The CFA on sub-group-B (n = 557) was used to cross-validate the most plausible factor structure model derived from EFA on sub-group-A, and it confirmed a two-dimensional model with a satisfactory fit to the data, explaining 49.3% of the total variance.

The challenging work situations expected to ensure the best practice in daily delivery of care were explored in the first sub-scale (12 items). From the focus group findings, it appears that nurses feel they have to overcome too many organizational and structural weaknesses in their daily practice. Furthermore, the international literature also shows that the context can be an obstacle to performing best practice (Adams 2000), and nurses have to increasingly deal with moral and ethical issues (Schluter et al. 2008). Increased technological and pharmacological interventions in everyday practice have been linked to the escalation in moral and ethical dilemmas experienced by nurses (Schluter et al. 2008). The attributes of caring situations sub-scale was developed considering ethical issues arising from the tool's theoretical framework; in fact, some items are attributable to moral or ethical situations or to situations designed to address organizational and structural weaknesses.

Situations concerning professionalism, such as relationships with colleagues or professional duties, were explored in the professional situations sub-scale (7 items). Nurses need to establish an effective communication with other colleagues to achieve best outcomes (Ghiyasvandian et al. 2014). Adams and Bond (2000) have highlighted the importance of interpersonal relationships to nurses' job satisfaction, and the present study's focus group findings were in line with that evidence. In fact,

some items of the above-mentioned sub-scale were intended to explore how confident nurses are in managing everyday professional relationships. Although organizational contexts need to give evidence-based practice a central role (Squires et al. 2015), nurses often experience that need as a challenging demand affecting their daily practice. These issues are also explored in the professional situations sub-scale.

The Nursing Profession Self-Efficacy Scale was also tested for concurrent validity as a final estimation of construct validity. The results showed a high positive correlation ($r = 0.63$; $p < 0.001$) between the developed tool and the GSE. That correlation was predicted by the theoretical framework of the two scales, as both measures address self-efficacy. The GSE refers to general everyday life and the Nursing Profession Self-Efficacy Scale measures broad nursing profession self-efficacy. The literature supports the expected positive correlation between the GSE and more specific self-efficacy scales (Luszczynska et al. 2005), such as the Nursing Profession Self-Efficacy Scale.

Limitations

There are some important limitations in this study that need to be considered when attempting to make sense of the findings. The main limitation of the Nursing Profession Self-Efficacy Scale is the strong influence of the Italian context. It appears a valid tool for Italian nurses, and it could be useful at an international level, although it has to be tested with more empirical research in different contexts to assess its validity in English and in different settings. Another intrinsic limit of this study is the convenience sampling used to enroll participants for the psychometric testing (i.e. phase 2).

Moreover, the tool investigates issues related to ethics and job duties, and for this reason some item responses could be influenced by social desirability, even though this appears unlikely considering the descriptive statistics of each item since the skewness and kurtosis indices were within $|1|$ and there was sufficient variance in the scoring. However, this does not exclude the fact that some self-reporting

bias is present in the results, particularly considering that some items' responses ranged from 2 to 5 (e.g. Item 15: Safeguard the right of patients' privacy and confidentiality in data processing).

In addition, future investigations could provide stronger evidence of validity estimates, supplying more information since this study had assessed the concurrent validity using the GSE but did not establish a divergent validity.

Conclusion

This empirical study developed and validated a 19-item tool to measure self-efficacy in the nursing profession. The results showed evidence of internal consistency, reliability, content validity, construct validity and concurrent validity, and it could be useful in managerial and empirical research areas. It will be important to test the validity of the Nursing Profession Self-Efficacy Scale in a different context than Italy, and the application of the scientific methodology from the literature allows re-testing in different languages.

Implications for nursing and health policy

The Nursing Profession Self-Efficacy Scale could answer the need for an assessment of nurses' confidence in their ability to cope with their work challenges. It could be useful in managerial and empirical research areas. Considering that the phenomenon of international nursing migration is common worldwide (Pittman et al. 2007), managers need to assess how confident their nurses are with their profession. Thus, in some cases managers have to deal with nurses educated in a different country with different cultural backgrounds or even educational differences. In the Italian context, 10% of nurses are foreigners (Fortunato 2012). For this reason, it is important to assess if a foreign aspirant has an accurate perception of the professional demands, and the Nursing Profession Self-Efficacy Scale could be useful in that direction.

The developed tool can also be used for empirical research. Social Cognitive Theory suggests the ways in which control beliefs (i.e. self-efficacy) affect behaviours and well-being or other self-regulatory beliefs (Bandura 1997). The Nursing Profession Self-Efficacy Scale could be a fruitful tool that facilitates application of theories (i.e. Social Cognitive Theory) in the nursing field as well as development of interventions. Furthermore, a measurement of self-efficacy could be useful to predict nursing clinical performance (Cheraghi et al. 2009).

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