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Full Length Research Paper

A validation of the novice nurse evaluation tool following one year of clinical experiences with the organization supports

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This paper is to validate an instrument for measuring novice nurses' experiences of organizational supports in the first year of their career as registered nurses. An instrument of 47 items was developed based on the services and programs provided for the novice nurses. The questionnaire was used as a pilot study on 30 purposive convenient samples in a variety of hospital settings. The response rate was 90% (n=27). Using Cronbach alpha=0.947 and Alpha coefficient, the findings were as follow: administration supports (Alpha=0.716); educational supports in exams (Alpha=0.854); supports for an English course (Alpha=0.853); colleagues' support (Alpha=0.930); and professionalism (Alpha=0.870). This suggesting an adequate internal consistency across the various domain contexts of the sample. The research question explores the participants' perceptions, the means were found to be as follow; Administration support (M = 3.56±0.87); educational support in preparing for exams and competencies (M =3.37± 0.61); support for an English course (M =3.47± 0.66); interpersonal relations and communication between co-workers, patients and families (M =4.06±0.77); and perception of oneself as a professional in regard to one's ability to perform and deal confidently with daily nursing tasks (M =4.03±0.55). The novice nurse evaluation tool is able to guide the organization to improve their novice nurse program in their first year of practice leading to safer clinical environments.

Keywords: Organizational Support, novice nursing, nursing education, professional nurses

INTRODUCTION

The novice nurse is defined as a nurse in the organization with less than one year of experience.

These nurses carried out the role of a registered nurse in the various clinical areas for a minimum of one year (Woods et al., 2015; Jewell, 2013; Kang et al., 2016). In the initial phase of the professional career, majority of the novice nurses experience several major challenges as they face their new life as registered nurses. There are

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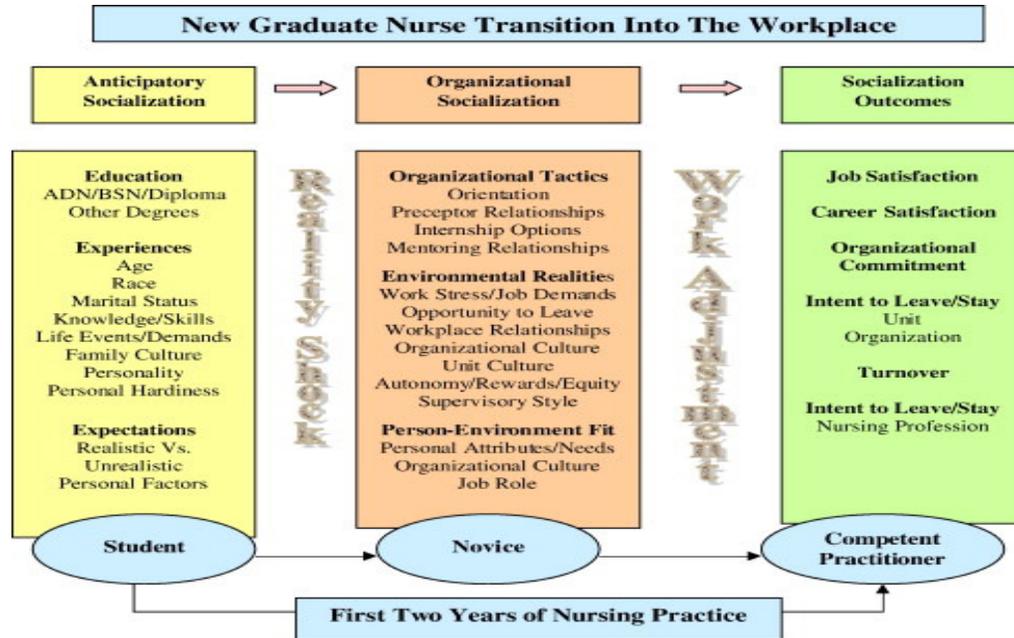


Figure 1. Conceptual Framework of Organizational Support to Novice Nurses

several factors due to which they face the challenges such as dramatic changes in their roles and responsibilities, decision-making situations, carrying out scheduled and unscheduled tasks, patient allocation and, in particular, accountability for each action they take (Franklin et al., 2014; Kozlowski-Gibson, 2015). Peer and managerial supports from the organization plays a major role in preparing nurses going through the journey as novices. Adequate preparation of programs such as orientation and educational programs, and availability of human resources to provide pastoral care, such as clinical instructors and preceptors, are all important to make the journey memorable (Doherty, 2016; Nilsson et al., 2014).

To measure the experience of this journey by assessing the support factors is essential. This study was therefore conducted to develop a set of questionnaires able to explore the supports provided by the organization, to ensure that the tool used for novice nurses' experience is developed and tested (Scott et al., 2008; Laschinger et al., 2015; Kowitlawakul, 2013).

The conceptual framework offered by Scott, Engelke, and Swanson (2008) discusses the new graduate nurses' transition into the workplace in three stages; the first stage, Anticipatory Socialization, which includes education, experience and expectations. The second stage, Organizational Socialization, includes organizational tactics, environmental realities and person-environment fit. And finally Socialization Outcomes, which are job satisfaction, career satisfaction, organizational commitment, turn-over and intent to leave or stay in the unit or even in the profession (Scott et al., 2008; Laschinger et al., 2015; Kowitlawakul, 2013).

Building on this conceptual framework and the support provided by the organization, four research questions were developed:

1. Is the administrative support adequate for novice nurses in their first year of the journey?
2. Is the educational support sufficient and appropriate for novice nurses in their first year of the journey?
3. What are their experiences like, as a professional nurse working in a team and interacting with co-workers, patients and families, and the environment?
4. How do the nurses perceive themselves professionally in performing the job descriptions?

Study objectives

- To create a reliable and valid tool for evaluation of hospital support for novice nurses
- To examine the content validity of the instrument developed specifically to evaluate the journey of the novice nurse.

MATERIALS AND METHODS

The design process of the whole study was founded on the conceptual framework of Radhakrishna (2007) (Radakrishna, 2007; Watkins et al., 2016). Step 1 in the study starts by establishing the background, which includes identifying the target population and setting out the study objectives. Step 2 establishes the conceptualization, by generating the criteria which are

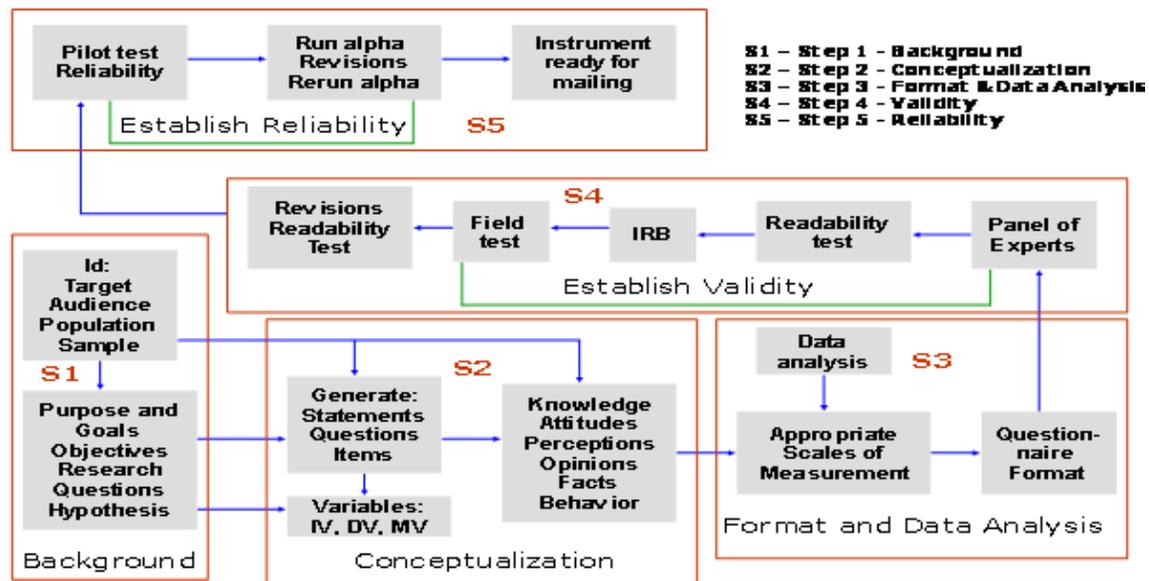


Figure 2. Design Process of the Study

used to discover the multiple variables (Numminen et al., 2014; Bathish et al., 2016). To classify the categories of criteria, these items fall under knowledge, attitudes, perceptions, opinion, facts and behavior. This is followed by Step 3, formatting and analyzing the data, where appropriate scales for measurement and the format of the questionnaire are chosen (Johnson et al., 2011). Step 4 is to establish the validity of the study by several steps such as its review by a panel of experts, running a readability test, obtaining ethical approval prior to field testing, and finally conducting a test for readability of revisions (Zhang et al., 2016). Finally in Step 5, the reliability of the study is established. In order to test reliability, a pilot test is first conducted, followed by running the alpha Cronbach's, then doing any needed revisions and re-running the test. At the end of these 5 steps the questionnaires were finalized and ready for mailing (Peters, 2014; Kowitlawakul, 2013).

A survey method translated into two languages proved to be useful in assessing and understanding the concept of the novice nurses' experience (Kozlowski-Gibson, 2015). This experience includes their work in the clinical practice and research units, as well as their learning achievements in collaboration with nursing education, and was divided into 5 basic areas of experience (Valdez, 2008).

- Administration support
- Exams and competencies
- Educational support
- Interpersonal relations and communication between co-workers, patients and families
- Self-assessment of professional development (Saunders and Vehviläinen-Julkunen, 2016)

This study was conducted as a pilot study to test the reliability and validity of the developed instrument. The questionnaire was distributed to all the novice nurses who completed one year service and who have also attended this program.

The areas of study involved the inpatient and outpatient care from various settings within the hospital. The participants were gathered from the Outpatient Department, Emergency Room, Male Surgical Ward and Obstetric and Gynecological Wards. Using a purposive method of sampling, 30 questionnaires were distributed to novice nurses (as defined above) in the pilot study.

An instrument was developed based on all the services and programs offered to the novice nurses. The 47 items were developed on the Likert scale (5 = strongly agree; 4 = agree; 3 = undecided, 2 = disagree, 1 = strongly disagree) and the items were divided into 4 domains under the main heading in order to address the research questions.

Within these domains, 4 items address administrative supports; 21 items are on the benefits of educational programs such as orientation, specific support programs, competencies and policies; and 12 items explore the supports of co-workers, patients and families. Finally, there were 10 items on self-evaluation of professionalism, dealing with the clinical working environment.

The four main research questions were utilized as a guide to develop questionnaires with 47 items on the Likert scale, written in English. The questionnaire was then translated into Arabic, reviewed by the researchers and by two expert panels for content and face validity. Finally, a back translation was done from Arabic to English by a third party, to ensure that conceptual equivalence of the meanings and understanding of the questions was maintained.

Table 1. Cronbach's alpha of the participants' responses

Instrument Sub-scale	Number of Items	Cronbach's alpha
1 Administration support	4	0.716
2 Exams and competencies	12	0.854
3 Educational support	9	0.853
4 Interpersonal relations and communication between co-workers, patients and families	12	0.930
5 Self-assessment of professional development	10	0.870
Total	47	

This study was conducted in two phases; phase one is to explore the novice nurses' perceptions of the organizational supports for their first year of clinical experience as registered nurses. Phase two is to validate the evaluation tool.

Prior to distribution, permission was obtained from the nursing department of the hospital and the King Abdulaziz University Hospital (KAUH) Research ethical committee. Managers from various wards were informed to obtain their cooperation and support. The participants were given a brief explanation regarding the purpose of the study, which was carried out anonymously and on a voluntary basis, so full confidentiality is assured.

Instruments' Reliability and Validity

Since the data collection instruments were newly developed and translated in two languages for this study, the instruments were tested for the validity of the translation and the reliability of each item (Meyer et al., 2015; Kowitlawakul, 2013). The researchers, a staff of nursing education and 4 nurses at the level of senior nursing officers reviewed and assessed the questions clarity and appropriateness to the situation. The results of the instrument study showed the content validity of the instrument was high and acceptable. It was agreed that all items were clear and understandable by the novice nurses.

RESULTS

The data that has been collected from the data collection was analyzed through SPSS version 16.0. To assure the quality of the data entry technique, two clerks were recruited for the purpose i.e. one for the data entry and one for data analysis. The absence of irrelevant, invalid, inconsistent or incomplete data was also assured by entering the analysis condition check. The questionnaire with less than 80% completed questions was automatically discarded by the data analysis system to

prevent vague analysis of the missing values.

To control the quality of the internal data analysis and study instruments, different subscales were investigated by the use of Cronbach's alpha. Moreover, to analyze the research variables, descriptive statistics were utilized for the scale of measurement and bivariate relationships were investigated through Pearson correlation, ANOVA, and independent t-tests. These analytical techniques helped in examining the differences in group means. The significance level for the study was set to be $\alpha=0.05$ for all analytical techniques.

Cronbach's coefficient alpha for the 47 items was computed at Alpha Excellent (High-Stakes testing) = 0.947 for the whole sample. Alpha scores for each item ranged from $\alpha=0.942$ to $\alpha=0.948$. Only 4 items were found to be >0.947 ; this suggests that the 47 items of the instrument demonstrated adequate internal consistency and may indeed measure a common latent variable. The sample size of 27 subjects out of a total population of 30 also yielded a potential power of 95% at the 5% level of significance (2-sided).

Alpha coefficients for each domain were also computed at: Administration supports ($\alpha=0.716$); exams and competency evaluation ($\alpha=0.854$), educational supports ($\alpha=0.853$); colleagues' supports ($\alpha=0.930$); and professionalism ($\alpha=0.870$) suggesting adequate internal consistency across the various domain contexts of the sample.

Finding 1

The response rates were 90% ($n=27$). Four items were developed to assess administration supports including hospital and nursing administration. The findings highlighted that the human resources department of the hospital need to improve the mechanism of support all nurses by providing policies, rules and regulations during the period of their early employment. While nursing administration is required to strengthen the mechanism of allocation to clinical areas based on the nurses' interest.

Table 2. Perceived Administrative Support from the Organization

Administrative support	Items	Mean	Sd.	Perception
Total perception	4	3.56	0.87	Agree

Table 3. Perceived Educational Support from the Organization

Educational support	Items	Mean	Sd.	Perception
Total perception on examination and competencies	12	3.37	0.61	Neutral
Total perception on English preparation	9	3.47	0.66	Agree

Table 4. Perceived Interpersonal Relations and Communication within the Organization

Interpersonal relations and communication between co-workers, patients and families	Items	Mean	Sd.	Perception
Total perception of work environment	12	4.06	0.77	Agree

Table 5. Perceived Self-assessment of Professional Development

Self-assessment of professional development	Items	Mean	Sd.	Perception
Perception of oneself as a professional	10	4.03	0.55	Agree

Finding 2

The items were divided into categories: 12 items explore perception of the preparation-to-work policies, exams and competency tests, and 9 items assess English preparation.

Finding 3

The weighted mean of 12 items on interpersonal relations and communication between coworkers, patients and families (including Head Nurses, Clinical Instructor, preceptor, colleagues and families) suggests agreements in these areas.

The findings of the 10-item statements showed the weighted mean of 4, which suggests that the nurses are in the category of 'agree' on their ability to perform and deal confidently with daily nursing tasks. After one year, 21 nurses (77.8%) will recommend this hospital to other colleagues.

DISCUSSION RECOMMENDATIONS

The study has found that the findings from the data analysis and the content validity were important in terms of the development of the initial 29 items of the novice nursing questionnaire. The data analysis was based on the assessment of the relevancy, simplicity and knowledgeability of the perception of the individuals who

participated in the study questionnaire (Jewell, 2013; Chachulaet al., 2015).

On the basis of the experts' feedback on the questionnaire, data collection and data analysis, several revisions were made in the study design before finalizing the study. Moreover, while designing the questionnaire, assessment of content validity, ease of interpretation, administration techniques, formatting issues and other problems were considered in order to maximize the reliability and validity of the study. This is why the content and analytical results found to be assistive and directed towards the research objective (Jewell, 2013; Kozlowski-Gibson, 2015).

Overall, the findings showed that the novice nurses perceive themselves positively after one year's experience in this organization. However, the human resource management at the hospital is required to offer a supportive mechanism for the novice nurses by improving policies, rules and regulations. This is also ensured by Chachula, Myrick and Yonge (2015) who stated that well-defined policies and regulations within the healthcare organization increases the support, motivation and learning of the employee especially those who are at the beginning of their career. It is also found that the interpersonal relations and close communication channels among the employees enhance the nursing skills and practices in the novice nurses (Peters, 2014; Zhang et al., 2016).

We recommend that the nursing administration adopting this tool for all novice nurses. The categories of

this instrument demonstrate the confidence of the novice nurse in their clinical practice, as expressed in the domains of administration, educational support and self-assessment of nursing professionalism. On the basis of these results, healthcare practitioners and nurses leaders are required to concentrate on the surveillance and nursing leadership interventions beyond the regular implemented policies so that the nursing work environment could be transformed (Jewell, 2013; Chachula et al., 2015).

The English program should be maintained; however, it needs to be reviewed to be related to the job and meet the nurses' demand. The hospital orientation program and specialty support program should be maintained; however, both programs need to be revised to enhance the nurses' interest. The results on the nurses' perception of the head nurses, the clinical instructors and the preceptors should be shared to them respectively for their further improvement. In conclusion, as a valid and reliable evaluation, the tool is important to nursing management to help build a safe environment culture.

Limitations of the study include the use of a small, convenience sample of Saudi nurses from one large tertiary teaching hospital. Further studies should explore deliberate practice in larger, more diverse samples from different geographic areas.

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