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**RESEARCH ARTICLE**

# THE DEVELOPMENT AND THE VALIDATION OF THE SELF PERCEIVED NURSE-PATIENT COMMUNICATION SKILL ASSESSMENT SCALE.

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## *Abstract*

The purpose of this study was to develop a reliable and valid assessment scale to measure the self perceived nurse patient communication skills. The first phase involved the conceptualization and operationalization of communication skills based on literature review and identification of the research gap. In the second phase, questionnaires and scales were reviewed, and in consultation with experts, 60 items were framed. In the third phase, face and content validity were assessed by a panel of experts. In the final phase, data was collected (N=120) to establish reliability and validity for the self perceived nurse patient communication skills. Using the Chronbach's alpha, test retest, split half reliability methods the internal consistency was assessed for the tool. The final 26 items had good internal consistency with Chronbach's alpha of 0.9. Principal component analysis was used to test the psychometric properties of the instrument and four factors namely Initiating and Building the Relationship, Gathering Information, Responding and Giving Information and Closing the Conversation emerged. The analysis also revealed that the self perceived nurse patient communication skill is related to the age, level of the course, domicile and family type. It is concluded that this tool is a useful tool to assess the self perceived nurse patient communication skill among the nursing students.



## Introduction:-

Communication of the nurse with the patient is the key and base of nursing that is offered in health care. Appropriate communication is one of the most important aspects of nursing and it is a challenging process. In nursing practice, nurses often have a great deal of information to give or share to others, and they are expected to do this effectively. Informing the patient about their illness and treatment is a part of effective communication skills. It not only helps to have a better understanding of the concerns of the patients, but also in offering appropriate emotional support. The proper communication process enables the nurses to explore in detail the concept of interpersonal communication and assist the nurses to identify, practice and apply a range of communication skills that will enable them to develop helpful and caring relationship with the patient (Neese, 2015). Without efficient and effective communication between the nurse and the patient, efficient health care cannot be achieved.

The healthcare sector in India challenges increasing demand of quality improvement activities among the health care personnel. This can only be attained only with the qualified nurses who possess expertise skills, competence, knowledge and compassion. But the reality is the health care industry suffers with the raising attritions and rapid staff turnover which entitles shortage of nursing personnel and complexity in utilizing nurses at all levels.

Consequently, the hospitals are dependent on the student nurses, at least in part, on their ability to engage and use them effectively as well as preparing and training them through the clinical experience (NABH, 2015).

Modern health care has become extremely complex and it continues to grow in complexity because of economic pressures (new levels of efficiency and productivity), and as a result of the increasing capabilities of modern medicine (Woods & Cook, 2001). In addition, enhanced patient rights, autonomy and expectations entail that while students need access to patients in order to learn, patients' views on who examines them and their rights to rest and privacy must be respected (Zeijden A, 2000). Yet, the demand for patient access continues unabated across the wide range of health professionals in training. Norgaard, Ammentorp, Kyvik and Kofoed (2012) stated that despite the knowledge of good communication as a precondition for optimal care and treatment in health care, serious communication problems were experienced by patients as well as by health care professionals.

Preparing students to create constructive communicative relationships is essential to nursing practice (Rosenberg & Gallo-Silver, 2010), because it enables students to respect (McGilton, Irwin-Robinson, Boscart, & Spanjevic, 2006) and provide safe nursing care for patients. But unfortunately the student nurses experienced a lag in their self confidence and uncertainty and negligence when they face increased responsibility and accountability about the health of their patients. The major reason of lack of self confidence is due to the competence in the communication skill or set of skills in achieving a meaningful and effective communication with patients and other team members. If they achieve proper competence in communication skill, that in itself may help develop personal and professional confidence and develop their identity as a nurse (Edwards, Smith, Courtney, Finlayson, & Chapman, 2004; Godson, Wilson, & Goodman, 2007; Lundberg, 2008). In addition, Suikkala, Leino-Kilpi, and Katajisto,(2008), observed that providing a proper instruction and information and professional awareness also played an important role in enhancing the confidence of the nursing students. The authors also identified that personality and a supportive clinical environment all have a significant part to play in building confidence levels of nursing students.

In order to develop a communication skill an individual should be analyzed and assessed well. For that purpose there were various scales available on the assessment of communication skills. One among them is SEGUE developed by Makoul G,( 2001a) and it is an acronym of Set the Stage, Elicit Information, Give Information, Understand the Patient's Perspective, and End the Encounter), it connotes the transition or flow of the medical encounter; from beginning to end, from problems to solutions. The disadvantage of this tool is that it is a checklist which can only rate 'yes' or 'no' and therefore, the quality of the action is failed to be evaluated. Kalamazoo's Essential Elements of Communication is an another rating scale with seven key elements of communication in clinical encounters namely, Build the relationship, open the discussion, gather information, understand the patient perspectives, share information, reach agreement, and provide closure (Makoul, 2001 b). Originally, the scaling options were three: 1. Done well; 2.Needs improvement and 3.Not done, which was later replaced by Calhoun et al (2009) with a 5-point Likert scale from poor to excellent. It is an observed rating scale not a self assessment scale.

The available assessment scales are mostly of observed rating scale but the self assessment on their communication scale was found to be lacking. Moreover the researched strongly believed that the insight on their real ability alone paves way to the motivation and involvement in the development of their skill. These all issues and other potent drives of change encouraged the researcher to develop the self perceived nurse patient communication skills, especially for the student nurses with an aim to improve the communication skill and enhance nurse patient relationship.

## Method:-

**Initial Steps in Item generation**: Items for the self perceived nurse patient communication skill were derived from the review of various communication literatures. Items were formulated considering the basic conversation between the nursing student and the patient in the clinical setup. Initially 60 items were framed by the first author. After a careful scrutiny it was reduced to 40 items and was sent for the content validity to a panel of seven experts in the nursing field. After face validation, thirty items were retained based on the advice of the panel and some of the items were reworded for clarity. For each stem of the item, five response categories, namely poor, fair, good, very good and excellent were provided. A higher score indicated better self perceived nurse patient communication skill. The self perceived nurse patient communication skill assessment scale with 30 items was then administered.

**Sample:**

The sample consisted of 120 women undergraduate nursing students from different Nursing colleges in Mysuru district, Karnataka, South India. Out of the 120, 60 were from I year and 60 were from IV (final) year and they were in the age group of 18-23 years.

**Procedure:** After obtaining permission from the head of the institutions, the purpose of the study was explained to the participants and after getting the written consent all the above tools were administered to the nursing students in their respective institutions.

Principal component analysis (PCA) with Varimax rotation was conducted to provide evidence of content validity. The internal consistency of the items included was measured using Chronbach's alpha and the correlations among them were identified using the Pearson's correlation coefficient The result from the PCA were examined to determine how many factors to be retained. Four factors were extracted and the items loaded more than 0.4 were retained. Thus we obtained 26 items that were found to be loading more than 0.4. ( Table 1). The resulting pattern matrix and the numbered items that were included in each component are also provided in table 1.Kaiser-Meyer-Olkin measure of sampling adequacy was 0.86 and Bartlett's test of sphericity showed a significance of <0.001. Factor-I with 10 items was termed as Initiating and Building Relationship, Factor-II with 7 items was termed as Gathering Information, Factor-III with four items was termed as Responding and Giving Information and Factor IV with five items was termed as Closing the Conversation.

**Table 1: Principal Component Analysis (Factor loadings of the 26 items) of Self Perceived Nurse Patient Communication Skill Assessment Scale.**

| | Component | | | |
|---|---|---|---|---|
| **Items** | **Initiating and Building Relationship** | **Gathering Information** | **Responding and Giving Information** | **Closing the Conversation** |
| Item1 | .645 | | | |
| Item 2 | .682 | | | |
| Item 3 | .560 | | | |
| Item 4 | .446 | | | |
| Item 5 | .698 | | | |
| Item 6 | | | | .809 |
| Item 7 | | | | .515 |
| Item 8 | .628 | | | |
| Item 9 | | | | .511 |
| Item 10 | .607 | | | |
| Item 11 | | | .734 | |
| Item 12 | .578 | | | |
| Item 13 | .639 | | | |
| Item 14 | .451 | | | |
| Item 15 | | | .546 | |
| Item 16 | | .606 | | |
| Item 17 | | .634 | | |
| Item 18 | | .731 | | |
| Item 19 | | | .476 | |
| Item 20 | | .700 | | |
| Item 21 | | | .613 | |
| Item 22 | | .683 | | |
| Item 23 | | | | .501 |
| Item 24 | | .670 | | |
| Item 25 | | .678 | | |
| Item 26 | | | | .626 |

The mean score of the four factors of Self perceived Nurse-Patient Communication Skills for the sample of 120 are given in Table - 2:

**Table 2: Mean Scores of Components of Self Perceived Nurse Patient Communication Skill Assessment Scale.**

| Variables | Mean(N-120) | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|
| Initiating and Building Relationship | 33.7917 | 6.40364 | 18.00 | 50.00 |
| Gathering Information | 24.8333 | 5.28568 | 10.00 | 35.00 |
| Responding and Giving Information | 13.3500 | 2.86870 | 4.00 | 20.00 |
| Closing the conversation | 16.9750 | 3.59379 | 8.00 | 25.00 |

The reliability using the test retest reliability was found to be significant with r = 0.98. The reliability of the twenty six item scale and the item based internal consistency reliabilities, Chronbach's alpha was 0.92 which was found to be significant (Table - 3). The Chronbach's alpha for the obtained four factors were also found to be significant (Table -4).

**Table 3: Reliability of Self perceived Nurse-Patient Communication Skill Assessment Scale.**

| Type of Coefficient | Reliability |
|---|---|
| Test Retest | 0.98 |
| Split half | 0.78 |
| Chronbach's Alpha | 0.92 |

**Table 4: Reliability coefficient dimension wise for Self perceived Nurse-Patient Communication Skill Assessment Scale.**

| No | Dimensions | Chronbach's Alpha |
|---|---|---|
| 1 | Initiating and Building relationship – 10 items | 0.86 |
| 2 | Gathering Information – 7 items | 0.88 |
| 3 | Responding and Giving information – 4 items | 0.69 |
| 4 | Closing the Conversation – 5 items | 0.74 |

The correlations among the four factors were assessed using the Pearson's correlation coefficient. Each of four factors had positive correlation between them (Table - 5).

**Table 5: Correlation Between the four factors of Self Perceived Nurse-Patient Communication Skills.**

| | Initiating & Building relationship | Gathering Information | Responding & Giving information | Closing the conversation |
|---|---|---|---|---|
| Initiating and Building Relationship | | .607** | .516** | .563** |
| Gathering Information | .607** | | .600** | .576** |
| Responding and Giving Information | .516** | .600** | | .547** |
| Closing the conversation | .563** | .576** | .547** | |

** Correlation is significant at the 0.01 level

The mean values of the responses for different socio-demographic variables are provided in Table-6. On comparing age, it was found that there was significant difference between the age group. On evaluating the other, socio-demographic variables, there was a significant difference between I year and IV year undergraduate student nurses on self perceived nurse patient communication skills. The I year students were found to score higher than IV year students. However when separate mean was calculated for each of the 4 factors based on the year of the student, ( Table-7) there was no statistically significant difference between the mean score of items in the Factor-I (Initiating

and Building Relationship) (p= >0.05). However, the mean scores for all the other three factors did show significant difference.

**Table 6: Association between the Self perceived Nurse Patient Communication Skills and Age, Year, Domicile and Family type.**

| Variables | Groups | Mean | SD | F |
|---|---|---|---|---|
| **Age** | 18 ( N- 20) | 94.78 | 13.40 | 5.682 * P(.000) |
| | 19 ( N-38) | 94.57 | 13.44 | |
| | 20 ( N-2) | 92.00 | 12.48. | |
| | 21 ( N-25) | 78.60 | 11.74 | |
| | 22 ( N-31) | 88.16 | 15.78 | |
| | 23 ( N-4) | 75.00 | 14.17 | |
| **Year** | I Year ( N-60) | 94.6 | 13.21 | 19.458 * P(0.000) |
| | IV Year (N-60) | 83.3 | 14.80 | |
| **Domicile** | Urban ( N-60) | 84.00 | 15.79 | 14.38 * p (0.00) |
| | Rural ( N-60) | 93.90 | 12.63 | |
| **Family Type** | Nuclear Family ( N-112) | 89.70 | 14.77 | 4.33* P (0.04) |
| | Joint Family ( N-8) | 78.38 | 16.47 | |

* Significant

There also noted a significant difference in response based on the students domicile. The students hailing from rural area scored higher than the students from the urban domicile. Similarly there was significant difference between those from Nuclear family and Joint family type, with those from nuclear family having higher scores which was significant.

**Table -7: Comparison of I year and IV year Nursing Students Self Perceived Nurse Patient Communication Skills**

| Factors | I Year | | | IV Year | | | t Test |
|---|---|---|---|---|---|---|---|
| | Mean | SD | Range | Mean | SD | Range | |
| **Initiating& building relationship** | 34.77 | 6.02 | 24 – 50 | 32.81 | 6.68 | 18 – 45 | 1.68 P (0.09) |
| **Gathering Information** | 26.95 | 3.59 | 17 – 35 | 22.71 | 5.86 | 10 – 33 | 4.77* P (0.00) |
| **Responding & Giving Information** | 14.95 | 2.15 | 10 – 20 | 11.75 | 2.60 | 4 – 17 | 7.3* P (0.00) |
| **Closing the conversation** | 17.93 | 3.44 | 11 -2 5 | 16.02 | 3.52 | 8 – 24 | 3.01* P (0.00) |

* Significant

## Discussion:-

Our intention was to develop a reliable and valid tool to assess self perceived nurse patient communication skills among the nursing students, since such a tool was not available for research for our socio-cultural setting in India. This study served the important function of both developing and testing an instrument and shedding light on key variables. The present study found that the self perceived nurse patient communication skill tool has considerable

reliability and validity. Regarding the validity of the tools, Faul and Hudson (1997) explained that the corrected item total correlations are an assessment of convergent construct validity and they recommended criteria was more than 0.40. This was applied and found all the items except 3 items (items-1, 15, 26) had more than 0.4. More specifically the results of this study showed that a four factor solution was appropriate to identify the differing components of nursing student's self perception on nurse patient communication skills. We obtained four factors through principal component factor analysis that explained a significant portion of the variance, and these four factors also proved to have good internal consistency for the items within each of the four factors. This was reflected in the high inter-correlation among the factors, ensuring that through different factors, the tool is assessing the communication skill of the nurse-patient.

Nunnaly and Bernstein (1994) have indicated Cronbach's alpha which is as high as 0.7 to be an acceptable reliability coefficient. In the present study the Cronbach's alpha was found to be .92 which is much higher than that was stated by Nunnaly and Bernstein (1994). Similarly other forms of reliability was also found to be high, though split half reliability was slightly lower than the other measures. One of the reasons could be that the items of the different factors are not placed evenly and hence the scores of the split of half would have been affected.

However the findings of the present study that the perceived nurse patient communication skills among the nursing students decreases as age and year advances needs explanation. Though it was not the objective of the study, hypothetically as the training advances the nurse patient communication skills also has to show an improvement which was not obtained in the present study. The result suggested that there is a tendency for students to devalue their self perception of nurse patient communication skills as they move through the program. Similar trend was found in relation to age and as age advanced, the skill showed a decreasing trend, which is in congruent with the year of study. This raises several questions extending from the quality of training to the 'burning out phenomena'. Deary, Watson and Hogston (2003) in a longitudinal cohort study of burnout and attrition in nursing students found that as years go by they tend to develop burn out phenomena which may not be directly linked to the stress, but may be due to the personality of the participants. Probably assessing the personality as well as the academic achievement and correlating those with the nurse-patient communication of the present participants may have helped to clarify this issue.

Another issue that has to be looked into is the social desirability factor. Further research is required to ascertain whether the social desirability factor has led the first year participants who are fresh entrants to the profession to rate themselves as possessing higher level of skills. Future research may also focus on whether the scores on self perceived skill correlates with the objective measures of communication skill like the supervisor rating or rating based on audio or video recorded nursing student-patient communication. It may also be worth exploring whether the self- perceived communication skill is related to empathy (Truax& Carkhuff, 2007) or sahya ( Manickam, 2014) which are considered as the qualities in helping.

There are some limitations to our study. First, the participants from only two institutions were included in the sample and therefore further study should be conducted with nursing students from various other institutions. Second, a larger size of participants may be considered for further validation and to replicate the psychometric properties of the tool. Third was that this study involved the nursing students from I year and IV year only and including those students from the II year and III year may have helped to clarify some of the issues that came as part of the study. Future studies are recommended to analyze the difference between the nursing students from different levels of their course as well as that of the nurse practitioners.

## Conclusion:-

Increasing awareness and need for the development of communication skill among the nursing students paved the way for the development of a new assessment tool. Self Perceived Nurse Patient Communication Skills is a reliable and valid tool to assess the communication skill of the nursing students. Though it was not the objective of the study, findings support the recommendation that communication skill training program should be an important part of the nursing curriculum. The utilization of the tool may increase the insight of the nursing students regarding their communication skill and also help to find their area of weakness in communicating. The scale may be further subjected to psychometric validation in other populations including nurses and among nursing students in different cultures.

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APPENDIX - I

**Self Perceived Nurse Patient Communication Skill Assessment Scale**

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Instructions: Read each item carefully and then tick the appropriate box to the right of each item that best describes you. You have to assess how well you think that you are using a specific skill while communicating with a patient in your day to day nursing care.

| Sl. no | STATEMENTS | POOR | FAIR | GOOD | VERY GOOD | EXCELLENT |
|---|---|---|---|---|---|---|
| 1. | I greet and show interest in the patient as a person during introduction. | | | | | |
| 2. | I use words that show care and concern throughout the interview. | | | | | |
| 3. | I use appropriate tone and pace throughout my interview. | | | | | |
| 4. | I maintain eye contact throughout my interview. | | | | | |
| 5. | I exhibit the posture that shows care and concern. | | | | | |
| 6. | I allow the patient to complete opening statement without interruption. | | | | | |
| 7. | I ask questions to elicit full set of concerns. | | | | | |
| 8. | I explain and state an agenda for the visit. | | | | | |
| 9. | I begin with patient's story using open-ended questions. | | | | | |
| 10. | I clarify the details as necessary with more specific questions. | | | | | |
| 11. | I summarize and give patient the opportunity to correct or add information. | | | | | |
| 12. | I allow transition effectively to additional questions. | | | | | |
| 13. | I ask about life events, circumstances, and other people that might affect the patient's health. | | | | | |
| 14. | I elicit patient's beliefs, concerns, and expectations about illness and treatment. | | | | | |
| 15. | I respond explicitly to patient's statements about ideas and feelings. | | | | | |
| 16. | I assess patient's understanding of problem and desire for more information. | | | | | |
| 17. | I explain using words that patient can understand. | | | | | |
| 18. | I ask if patient has any questions. | | | | | |
| 19. | I Include patient in choices and decisions to the extent one desires. | | | | | |
| 20. | I check for mutual understanding of diagnostic and/or treatment plans. | | | | | |
| 21. | I ask about patient's ability to follow diagnostic and/or treatment plans. | | | | | |
| 22. | I try to identify additional and appropriate resources. | | | | | |
| 23. | I ask if patient has questions, concerns or other issues | | | | | |
| 24. | I summarize what the patient has told after the interview. | | | | | |
| 25. | I clarify follow-up or contact arrangements. | | | | | |
| 26. | I thank the patient and close the interview. | | | | | |