The aptitude assessment is viewed as central to career planning. In fact there are significant and important differences in aptitudes requirements across jobs. Identifying careers that match the aptitudes, increase the chance for long-term satisfaction and success on the job and an individual’s aptitude profile remain stable over time.

Aptitudes are unique or unusual potentials or abilities of an individual to acquire general knowledge and skill in many fields, or to acquire specific knowledge and skill in one field. Snow (1994) expanded the definition of aptitude from conventional cognitive-based strategies and abilities to include affective and conative characteristics. Johnston (1994) and Cronbach & Snow (1977) postulated the tripartite combination of cognitive orientation affective orientation, and conative orientation. Field et al (1984) mentioned that clinical competence in nursing is evaluated using cognitive, affective and psychomotor domains.

Review of the literature reveals that most of the nursing research focuses only on the cognitive domain. Lyons et al (1997) claimed that the emotional intelligence adds significant performance attributed to the cognitive abilities associated with general intelligence. Wong & Wong (1999) concluded that the content in science courses may have unique relevance to nursing and, therefore, may be a factor in their predictive value.

Instant study was undertaken to design a tool (NAT), which could help in weeding out candidates (entrants) ‘unfitted for’ nursing and, simultaneously facilitate selection of candidates most ‘fitted for’ nursing having the potential to acquire a high degree of proficiency in nursing, by virtue of their possessing requisite intelligence (IQ), emotional strength (EQ) and psycho-motor Skills (PMS). This study sought to develop a theory-based reliable and valid ‘Nursing Aptitude Test’ to measure aptitudes requisite for excellent proficiency in nursing.

Methodology
Quantitative methodological survey research approach and non-experimental research design was used for the purpose. The setting of the study was College of Nursing, CMC, Ludhiana.

The study population consisted of students of College of Nursing, CMC, Ludhiana. The sample consisted of 120 students [20 students from I, II and III year each of GNM along with 15 from I, II, III and IV year each of B.Sc. (N)]. Written consent was obtained to meet the ethical considerations. Simple random sampling technique was used to collect data. However, it could be collected only from 115 subjects, as 2 were absent and 3 did not complete the test-taking.

The Tool (NAT): It was developed from the professional literature review; answers to the open-ended questions from the nurses with at least two years of clinical experience; opinions of the experts; and feedback from the students. It consisted of four parts:

Socio-demographic variables included age, sex, religion, academic achievement, birth order, type of family, parents’ education and occupation, family income, family size as well as scholastic achievement.

Cognitive Aptitude (Intelligent Quotient or IQ) Test comprised of sub-tests on Knowledge of Applied Sciences (9), Judgment (11), Language Skills (6), Verbal Reasoning (10) and Reading Aptitude (10) having two parts each thus, 46 items in total. One (1) mark each for the right answers and zero (0) for the wrong answers were provided. Maximum score for this test was fifty-six (56) and minimum zero (0).

Affective Aptitude (Emotional Quotient/Intelligence or EQ/ EI) Test consisted of five sections on self-awareness (13), self regulation (14), self motivation (20), empathy (12) and social skills (14). The items were scored on ‘Five-point Likert Scale’ as follows: Strongly Disagree: 1, Disagree,
Neither Agree Nor Disagree: 3, Agree: 4, and Strongly Agree: 5. Maximum score for this test was 365 and minimum 73. The negative items were scored reversely.

**Conative Aptitude (Psychomotor Skills or PMS) Test** comprised of 10 psychomotor skill activities. One mark each for the right answer and zero for every wrong answer were provided. Activity #6 carried 5 marks as the respondent had to make five words with five alphabets each. For each correct word, 1 mark was provided. Maximum score was 14 and minimum 0.

**Data Collection:** Questionnaire was used for data collection. After completion of Cognitive and Affective Aptitude tests, subjects performed 10 psychomotor skill activities to complete the conative aptitude test. Average time to complete the test was between 40 minutes to one hour 10 minutes.

**Validity of NAT**

*Face Validity* was checked by five experts (3 nurse educators and 3 clinical psychologists), who informed that the tool appears to measure nursing aptitude.

*Content Validity* was determined by incorporating the suggestions of five Clinical Psychologists and three Nurse Educators to ensure clarity, relevance, appropriateness, adequacy, meaningfulness and relatedness of the tool.

*Construct Validity* was established by pre-testing the tool on 10 nursing experts and pilot study on 115 students. Test items difficulty and discriminating indices (D-value) were determined by applying item analysis. Results of item analysis of responses gathered from both, the experts and students, were compared.

Items with negative D-value and items with D-value ≤ 0.21, both for experts and students, were deleted from the initial NAT consisting of 174 items; whereas items with D-value ≤ 0.21 of the experts only and (not the students) were retained. The test blueprint now consisted of 129 items and outlined the cognitive, affective and conative aptitudes for nursing.

**Reliability** of cognitive aptitude was 0.85 and 0.82, of affective aptitude 0.83 and 0.84 by Cronbach’s alpha coefficient and split-half methods respectively. Reliability of conative aptitude test was established by applying K.R-20 and was found to be 0.72.

**Time & Accuracy of Activities** of each activity relating to Conative Aptitude Test was observed and recorded (Table 1).

**Conclusion**

Based on results of the item analysis and reliability, the final form of NAT was assembled, which retained all good items of its three domains; i.e. cognitive, affective and conative, so that a theory-based reliable and valid ‘Nursing Aptitude Test’ could finally be created for identifying and measuring the aptitudes requisite for excellent proficiency in nursing, both academically and clinically in the students seeking admission to nursing institutions.

**References**


| Table 1: Conative Aptitude Test: Average of Working Time related to Psycho-motor Skills |
|-----------------|-----------------|
| Item No.       | Working Time   |
| 1              | 26 sec          |
| 2              | 29 sec          |
| 3              | 10 sec          |
| 4              | 52 sec          |
| 5              | 1 min 44 sec    |
| 6              | 4 min 54 sec    |
| 7              | 1 min 1 1 sec   |
| 8              | 40 sec          |
| 9              | 10 sec          |
| 10             | 12 sec          |