

Development of the Near-Death Phenomena Knowledge and Attitudes Questionnaire

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ABSTRACT: In the first study of nurses' knowledge of and attitudes toward near-death phenomena and patients who have experienced them (NDErs), 20 registered nurses in Intensive or Cardiac Care Units completed a questionnaire containing 29 true/false/undecided statements about near-death phenomena (alpha reliability .83), 29 Likert items concerning attitudes toward such phenomena (alpha .84), and 25 Likert items concerning attitudes toward care of NDErs (alpha .81). The revised questionnaire has high levels of content and construct validity, and acceptable levels of internal consistency, and is therefore a valid and reliable tool.

The near-death experience (NDE) is a clinical event with significant implications for the patient, and needs to be recognized and understood by health care professionals who care for these patients. However, nurses working with critically ill patients have limited knowledge about NDEs. Annalee Oakes (1981, p. 77) stated that "critical care team members are only beginning to know about these phenomena and how they might be used in patient care plans." Studies dealing with nurses' knowledge of and attitudes toward near-death phenomena and NDErs do not exist in the literature. Due to the lack of attention to

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this topic, in order to carry out the study of the problem an appropriate instrument to assess the knowledge level and attitudes of nurses needed to be developed. Therefore, the purpose of this study was to develop a reliable and valid instrument to measure (a) nurses' knowledge of near-death phenomena, (b) nurses' attitudes toward near-death phenomena, and (c) nurses' attitudes toward care of patients who have had NDEs.

Literature Review

Review of the literature revealed that near-death phenomena consist of a core experience, of which some or all of its 15 components as designated by Raymond Moody (1975) may occur during critical illness.

Kenneth Ring (1980) studied 102 persons using a structured interview schedule that asked a series of probing questions designed to determine the presence or absence of the various components of the core experience as described by Moody. Ring constructed an NDE index, called the Weighted Core Experience Index (WCEI), based on Moody's analysis of the core experience. Scores on the WCEI ranged from 0, indicating an absence of any NDE, to twenty-nine. Independent investigators (Ring, 1980; Sabom, 1982) have found that a score of 6 or higher on the index is evidence of an NDE. The index indicated a core experience incidence rate of 48% in Ring's study. However, the data indicated that core experience incidence may vary as a function of the manner of coming near death, so the core experience incidence rate may differ with different samples.

George Gallup (1982) studied American beliefs and conceptions of life after death, through a survey of 1,500 adult Americans. According to Gallup, about one of every seven adult Americans has been close to death at least once, and approximately five percent of our population has had an NDE; that is, approximately 35% of individuals who come close to death reported NDEs.

Near-death research in the past few years has focused on the interpretation of NDEs. Stuart Twemlow, Glen Gabbard, and Fowler Jones (1982) described 34 NDEs and concluded that subjects who had had NDEs did not differ from control subjects in terms of psychological health or background.

Bruce Greyson (1981, 1983) proposed several psychological interpretations of NDEs that can encompass the paranormal components

and beneficial effects of NDEs. He concluded that NDEs may serve a number of psychological functions.

James Lindley, Sethyn Bryan, and Bob Conley (1981) reported a study of 50 NDEs and concluded that NDEs are not influenced by demographic factors, that NDEs produce profound positive personality changes, and that parts of the NDE may be related to endorphins. Daniel Carr (1981, 1982) proposed that certain NDE characteristics are suggestive of a limbic lobe syndrome and may be precipitated in a near-death state by the release of beta-endorphins, giving rise to clinical symptoms such as depersonalization, involuntary memory recall, intense emotions, and hallucinations.

Instrument Development

This study was methodological in focus, and was concerned with developing, validating, and determining reliability of an instrument to identify nurses' knowledge of near-death phenomena, attitudes toward those phenomena, and attitudes toward care of patients who have had NDEs.

The instrument was tested in the Medical Special Care Unit (MSCU), the Burn Special Care Unit (BSCU), and the Surgical Intensive Care Unit (SICU) at a large midwestern medical center.

The target population of the study consisted of all registered nurses (RNs) currently employed in Intensive Care Units (ICUs) or Cardiac Care Units (CCUs). The accessible population consisted of all RNs currently employed in ICU/CCU departments at the medical center. A convenience sampling procedure was used for the study, whereby all available RNs in each ICU were studied: 6 from the SICU, 9 from MSCU, and 5 from the BSCU. A total of 20 RNs were included in the study. Subjects were contacted individually while on duty, and were asked to complete the questionnaire and return it to the investigator immediately. Effort was made to include as many RNs as possible from each unit by including RNs from all three shifts.

The literature was reviewed in order to construct specific items for each scale in the questionnaire. The items constructed were reviewed for content validity by experts in the disciplines of nursing, sociology, and psychology. Items deemed ambiguous or inappropriate were reworked or discarded. Item components established for the knowledge scale were (a) elements of the NDE; (b) predisposing and precipitating factors of NDEs; (c) sequelae of NDEs; and (d) possible etiologies of NDEs.

Item components of the attitude toward near-death phenomena scale were (a) possible etiologies of NDEs; (b) near-death education in nursing school; (c) nurses' participation in the health care team; and (d) nurses' role in educating patients about NDEs.

Item components of the attitude toward patient care scale were (a) nurses' role in caring for patients who have had NDEs; (b) relevance of NDEs to nursing practice; and (c) implications of NDEs for nursing.

The questionnaire was composed of 29 knowledge statements dealing with near-death phenomena in a true/false/undecided format, 29 attitude statements in a Likert format dealing with near-death phenomena, and 25 attitude statements in a Likert format dealing with care of patients who have had NDEs. For the attitude scales in the questionnaire, composed of positive and negative statements toward near-death phenomena and care of patients who have had NDEs, subjects could respond "strongly agree," "agree," "undecided," "disagree," or "strongly disagree." For positive statements, "strongly agree" received a score of 5; for negative statements, "strongly disagree" received a score of five.

A review of the literature also suggested relevant demographic data to be included in the study: subjects' age, sex, education, religion, religiosity, personal NDE, and length of experience in ICU/CCU nursing.

Because reliability and validity for the instrument had not been established, and because of the lack of nursing literature concerning near-death phenomena, open-ended questions were included. The purpose of these questions was to establish each subject's current knowledge of near-death phenomena, and to enable the subjects to describe any questions, thoughts, or feelings raised by the questionnaire.

None of the subjects had ever had a personal NDE, but 19 subjects (95%) indicated they had heard about NDEs before participating in the study. When asked to describe a NDE in their own words, the subjects mentioned an average of 2.75 of Moody's (1975) 15 elements of the NDE; the largest number of elements identified by any subject was 7. Table 1 shows the number and percent of subjects who named each of the 15 elements. As shown in the table, 17 subjects (85%) described the out-of-body experience as part of an NDE; 9 subjects (45%) described a "being of light" as a bright light, God, or heaven; and 0 subjects mentioned ineffability, the life review, or new views of death as being part of the NDE.

Responses to the open-ended questions were varied, ranging from "fascinating—I'd like to know more about NDEs" to "I don't see how this can help anyone." Three subjects questioned the effect of drugs

Table 1
Elements of Near-Death Experiences Mentioned
by Subjects (*N* = 20)

<i>Element</i>	<i>N^a</i>	<i>%^b</i>
1. ineffability (difficulty describing experience)	0	0
2. hearing the news	4	20
3. feelings of peace and quiet	3	15
4. the noise	4	20
5. the dark tunnel	6	30
6. the out-of-body experience	17	85
7. meeting others	4	20
8. the Being of Light	9	45
9. the life review	0	0
10. the border or limit	2	10
11. coming back	6	30
12. telling others	1	5
13. effects on lives	1	5
14. new view of death	0	0
15. corroboration of events	4	20

^a column totals more than 20 because respondents could mention more than one element
^b column totals more than 100% because respondents could mention more than one element

and/or alcohol on the NDE and the relationship between suicide and NDEs. One subject asked how to ask patients if they have had an NDE; another wondered whether nonNDErs felt threatened by people who had had NDEs; and a third asked whether a NDE should be noted in the patient's chart or kept confidential.

Reliability and Validity of the Instrument

Internal consistency of the scales was evaluated by determination of Cronbach's coefficient alpha, using the Statistical Package for the Social Sciences (SPSS) program for reliability. Alpha reliabilities were .83 for the knowledge scale, .84 for the attitude toward near-death phenomena scale, and .81 for the attitude toward patient care scale.

One pair of responses was included in each scale to check reliability of subject response. Item analysis revealed that those statements had positive correlations of .59 for the knowledge scale, .48 for the attitude

toward near-death phenomena scale, and .38 for the attitude toward patient care scale.

Content validity of the questionnaire was maximized by the process by which the items were derived. Experts in the field of near-death phenomena reviewed the items to determine whether they adequately represented the content of near-death phenomena.

Construct validity of each scale was evaluated by factor analysis using the SPSS program for principal factoring with varimax rotation.

Knowledge Scale

The 29 items of the knowledge scale were factored together, and resulted in four factors accounting for 56.9% of the variance, as indicated in Table 2. The four components of the knowledge scale that were established *a priori* (see above) were compatible conceptually with the subscales obtained by the factor analysis. The components of the knowledge scale that were established, however, were found to be conceptually ambiguous, while the factors obtained by factor analysis were conceptually clearer, and were labeled as follows: (a) knowledge of the NDE itself; (b) causes and correlates of the NDE; (c) concomitant events and activities associated with the NDE; and (d) knowledge about NDErs' perceptions.

Six items on the knowledge scale (items 1, 7, 9, 18, 19, and 28) did not clearly relate conceptually to any of the four factors, and had factor loadings of less than .52; those items were eliminated from the scale.

Cronbach alpha reliabilities were run on the 23-item knowledge scale in order to test the internal consistency of the subscales. Reliability coefficients were .84 for the knowledge of the NDE itself subscale, .77 for the causes and correlates of the NDE subscale, .72 for the concomitant events or activities associated with NDEs subscale, and .72 for the knowledge about NDErs' perceptions subscale; all four of these subscales showed acceptable levels of internal consistency.

Attitude Toward Near-Death Phenomena Scale

The 29 items of the attitude toward near-death phenomena scale were factored together, and yielded four factors accounting for 58.4% of the variance. The four components of the attitude toward near-death phenomena scale that were established *a priori* (see above) were compatible conceptually with the subscales obtained by the factor

Table 2
Factor Loadings for Principal Factoring with Varimax Rotation
of Knowledge Scale

<i>Statement Item</i>	<i>Factors</i>			
	<i>Knowledge of NDE</i>	<i>Causes and Correlates</i>	<i>Concomitant Events</i>	<i>Person's Perceptions</i>
1. The NDE is a manifestation of a toxic psychosis induced in the oxygen-starved brain of a dying individual.	.28	.09	.45	-.21
2. NDEs occur only near death.	.45	*-.61	.14	.05
3. External events described by the NDE survivor can often be corroborated by those people who participated in the resuscitation.	.02	-.04	*.57	*-.54
4. A point may be described by the NDE survivor where the person was told or had the choice to return to his body.	.44	-.30	.23	*.68
5. Suicide attempters have lower incidences of NDEs than those who have NDEs triggered by illness or accident.	.35	*.71	.30	.00
6. Alcohol intoxication while close to death has no effect on occurrences of NDEs.	*-.57	*.57	.34	.03
7. Most patients remember nothing from during the time they were unconscious.	.01	-.01	.05	-.49
8. People who have NDEs describe their experiences in practically the same terms.	*.72	.14	-.11	.12
9. Negative attitude and personality changes have been reported as a result of NDEs.	.33	.03	.27	-.01
10. Most people who have NDEs are eager to tell others about it because of the beauty and peace encountered during the experience.	-.12	.08	.21	*.80
11. Suicide-induced NDEs are unpleasant.	.06	*.65	-.14	.08
% variance	21.8	15.0	10.4	9.7
cumulative % variance	21.8	36.8	47.2	56.9
correlation coefficients > .51 are starred				

Table 2 (continued)
Factor Loadings for Principal Factoring with Varimax Rotation
of Knowledge Scale

<i>Statement Item</i>	<i>Factors</i>			
	<i>Knowledge of NDE</i>	<i>Causes and Correlates</i>	<i>Concomitant Events</i>	<i>Person's Perceptions</i>
12. NDEs are caused by therapeutic drugs administered to a person at the time he is near death.	-.11	-.05	*.65	.14
13. NDEs are a way of defending against the anxiety of dying.	.04	.41	*.57	.35
14. People are accurately able to describe their resuscitation, even though they are thought to be dead.	.04	.07	*.63	.27
15. Cross-cultural comparisons of NDEs show significant differences in the reports of NDEs made by individuals with differing cultural backgrounds.	.36	.42	-.19	*.66
16. Over 80% of NDE survivors report a greater appreciation for life and of attempting to live more fully following a NDE.	*.80	.03	.22	.12
17. There are no significant differences between NDEs related by those who are <i>not</i> given drugs and NDEs related by those who are given drugs.	.32	.18	*.69	.20
18. The more religious an individual the more likely he would be to have a NDE.	.51	-.24	.21	-.14
19. Individual interpretation of the content of NDEs is influenced by previous religious background.	.45	.21	.01	.25
20. NDE survivors attend church more often following a NDE.	*.61	.05	-.30	.06
21. People who have NDEs have difficulty putting their experiences into words.	.43	-.36	.11	*.64
% variance	21.8	15.0	10.4	9.7
cumulative % variance	21.8	36.8	47.2	56.9
correlation coefficients > .51 are starred				

Table 2 (continued)

<i>Statement Item</i>	<i>Factors</i>			
	<i>Knowledge of NDE</i>	<i>Causes and Correlates</i>	<i>Concomitant Events</i>	<i>Person's Perceptions</i>
22. The NDE has been described as being peaceful, quiet, and without sensation of pain.	*.80	.07	.00	-.27
23. Approximately 50% of those who have been close to death due to illness or accident have NDEs.	.21	*.65	.10	.02
24. Alcohol intoxication while close to death diminishes the likelihood of a NDE.	.06	*.65	.43	.08
25. People who take LSD have similar experiences to those who have NDEs when close to death.	.10	*.80	-.08	-.47
26. The impact of NDEs has been to increase the suicide rate because the NDE is so pleasant and peaceful.	-.08	.12	*.74	-.27
27. The NDE has a powerful effect on a patient's subsequent belief in an afterlife.	*.74	.07	.13	.44
28. Movement through a dark tunnel with a bright light at the end is the element most often described by those who have NDEs.	-.02	.07	-.12	.01
29. A complete panoramic review of one's life in a short amount of time is undergone by the individual during the NDE.	*.69	.37	.36	.10
% variance	21.8	15.0	10.4	9.7
cumulative % variance	21.8	36.8	47.2	56.9
correlation coefficients > .51 are starred				

analysis, the results of which are shown in Table 3. As with the knowledge scale, however, the components of the attitude toward near-death phenomena scale that were established were found to be conceptually ambiguous, while the components obtained by factor analysis were conceptually clearer. Factors identified for the attitude toward near-death phenomena scale were labeled as follows: (a) reporting

Table 3
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Near-Death Phenomena Scale

<i>Statement Item</i>	<i>Factors</i>			
	<i>Reporting NDEs</i>	<i>Influencing/ Affecting Care</i>	<i>Psychological Implications</i>	<i>Nursing Care</i>
1. Patients who have near-death experiences need to share their experiences.	.48	.42	-.41	-.28
2. Patients who are on drugs or intoxicated are more likely to have NDEs than those who are not.	.39	-.17	-.07	.08
3. Students should be encouraged to carry out research dealing with near-death phenomena.	*.67	.34	.30	.29
4. If a patient tells me an extraordinary death experience, I should not document the patient's report of the experience in the chart.	-.35	*.76	.26	.01
5. Patients who arrest are able to remember what happens to them during CPR.	-.04	-.11	*.59	*.62
6. Patients who have had NDEs should be invited to participate in inservice conferences to relate their experiences.	*.71	.02	-.16	-.27
7. A course dealing with near-death phenomena should be available to nursing students.	*.55	.24	.29	*.54
8. Some patients are reluctant to report their NDEs.	-.02	*.56	.26	.13
9. Nurses should document the patient's report of a NDE in the chart.	.00	*.88	-.01	.22
10. Most people who have NDEs have underlying psychological problems.	.30	.17	*.60	.14
% variance	24.8	14.2	10.4	9.0
cumulative % variance	24.8	39.0	49.4	58.4
correlation coefficients > .51 are starred				

Table 3 (continued)
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Near-Death Phenomena Scale

<i>Statement Item</i>	<i>Factors</i>			
	<i>Reporting NDEs</i>	<i>Influencing/ Affecting Care</i>	<i>Psychological Implications</i>	<i>Nursing Care</i>
11. There is really very little that can be done to help a patient who has a NDE.	-.01	.38	-.05	-.33
12. Stories I have heard about near-death phenomena frighten me.	.17	-.10	*.64	-.12
13. People's lives are changed very little, if at all, as a result of their NDEs.	.43	.05	.07	-.13
14. Patients who report NDEs actually have these experiences.	*.70	.25	.40	.11
15. Students should not be allowed to work with patients who report NDEs.	.04	.11	*.62	-.23
16. There is too much emphasis on NDEs in the nursing literature.	.37	-.24	.38	-.04
17. Students would very likely benefit from taking a course dealing with near-death phenomena.	-.13	*-.52	.28	-.17
18. Nurses should be the first people to hear patients' NDE reports.	-.07	.10	-.17	*.71
19. Continuing education programs should be developed to help nurses work with patients who have had NDEs.	*.80	.26	.21	.29
20. Most people who have NDEs read something about NDEs before actually having the experience.	.14	*.60	.20	-.19
21. An inservice conference on near-death phenomena is a waste of valuable time.	*.79	.38	.16	.15
% variance	24.8	14.2	10.4	9.0
cumulative % variance	24.8	39.0	49.4	58.4
correlation coefficients > .51 are starred				

Table 3 (continued)
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Near-Death Phenomena Scale

<i>Statement Item</i>	<i>Factors</i>			
	<i>Reporting NDEs</i>	<i>Influencing/ Affecting Care</i>	<i>Psychological Implications</i>	<i>Nursing Care</i>
22. Courses dealing with near-death phenomena should not be included in nursing school curricula.	*.56	-.31	.13	.03
23. The more religious a patient is, the more likely he will be to have a NDE.	.44	.27	-.01	-.49
24. Most of what patients remember of their NDEs is wishful thinking.	*.56	.09	*.64	-.02
25. Patients who report NDEs should automatically be referred to a psychiatrist.	*.61	-.15	*.58	-.01
26. Patients need to be reassured that their NDEs are normal, and do not indicate psychological imbalance.	-.10	.19	*.86	.07
27. Nurses should inform the patient's physician if a NDE occurs.	.28	*.76	-.15	-.13
28. Nurses should ask patients who survive a cardiopulmonary arrest if they remember anything during the time they were clinically "dead."	.30	-.10	-.17	*.80
29. Long-range psychological and emotional support should be offered for those who have NDEs.	.12	*.71	.05	-.22
% variance	24.8	14.2	10.4	9.0
cumulative % variance	24.8	39.0	49.4	58.4
correlation coefficients > .51 are starred				

NDEs; (b) factors influencing or affecting care; (c) psychological implications of NDEs; and (d) patient care activities surrounding NDEs.

Six items on the attitude toward near-death phenomena scale (items 1, 2, 11, 13, 16, and 23) did not clearly relate conceptually to any of the four factors and had factor loadings of less than .52; those items were eliminated from the scale.

Cronbach alpha reliabilities were run on the 23-item attitude toward near-death phenomena scale in order to test internal consistency of the subscales. Reliability coefficients were .90 for the reporting NDEs subscale, .70 for the factors influencing or affecting care subscale, .80 for the psychological implications of NDEs subscale, and .73 for the patient care activities surrounding NDEs subscale; all four subscales showed acceptable levels of internal consistency.

Attitude Toward Patient Care Scale

The 25 items of the attitude toward patient care scale were factored together, and yielded three factors accounting for 53.4% of the variance. The three components of the attitude toward patient care scale that were established *a priori* were compatible conceptually with the subscales obtained by the factor analysis, the results of which are shown in Table 4. As with the other scales, however, the components of the attitude toward patient care scale that were established were found to be conceptually ambiguous, while the factors obtained by factor analysis were conceptually clearer. Factors identified for the attitude toward patient care scale were labeled as follows: (a) importance of nurses' attitudes to patient care; (b) patients' perceptions of their NDEs; and (c) nurses' awareness of the effect of NDEs on patients.

Five items on the attitude toward patient care scale (items 3, 4, 11, 16, and 17) did not clearly relate conceptually to any of the three factors and had factor loadings less than .52; those items were eliminated from the scale.

Cronbach alpha reliabilities were run on the 20-item attitude toward patient care scale in order to test the internal consistency of the subscales. Reliability coefficients were .92 for the importance of nurses' attitudes to patient care subscale, .76 for the patients' perceptions of their NDEs subscale, and .70 for the nurses' awareness of the effect of NDEs on patients subscale; all four subscales showed acceptable levels of internal consistency.

Discussion

The Near-Death Phenomena Knowledge and Attitude Questionnaire requires further reliability and validity testing. In this study, alpha reliability coefficients provided indices of the instrument's internal consistency, but not of the instrument's stability over time. Neither

Table 4
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Care Scale

<i>Statement Item</i>	<i>Factors</i>		
	<i>Importance of Nurses' Attitudes</i>	<i>Patients' Perceptions</i>	<i>Nurses' Awareness</i>
1. Monitoring the patient's physical condition is more important in the ICU than psychological support.	.40	.04	*.59
2. An inservice program on NDEs would be a waste of time.	*.87	.13	-.08
3. Knowledge of NDEs can be used to deter suicide.	.17	.17	.33
4. Patients who are preoccupied with the concept of a more beautiful existence after death should be considered suicide risks.	-.02	-.14	.51
5. Patients are often aware of the code team and its resuscitation activities even after respiration and circulation cease.	.13	.09	*.66
6. Patients who have NDEs should have the same quality of care as patients who do not have NDEs.	*.55	.25	.17
7. Patients who have NDEs should be transferred to a psychiatric floor as soon as possible.	*.75	.36	.13
8. Nurses should not postpone talking about NDEs with a patient even if his clinical condition is unstable.	.04	*-.52	.00
9. Nurses should not interview post-CPR patients about their NDEs without supervision of a physician.	-.10	.32	*-.79
10. I should listen attentively to any NDE report and allow the patient to complete the story.	*.59	.00	*.67
11. It is dangerous for suicidal patients to read NDE accounts.	.03	.38	-.31
12. Patients who are preoccupied with their NDEs should be referred for professional help.	.16	*.67	-.05
13. Dying patients would benefit from hearing another person's NDE.	-.11	*.70	.33
14. Patients should be able to share their feelings and recollections about their NDEs with whomever they feel most comfortable.	*.74	.06	.49
% variance	29.6	15.1	8.7
cumulative % variance	29.6	44.7	53.4
correlation coefficients > .51 are starred			

Table 4 (continued)
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Care Scale

<i>Statement Item</i>	<i>Factors</i>		
	<i>Importance of Nurses' Attitudes</i>	<i>Patients' Perceptions</i>	<i>Nurses' Awareness</i>
15. I would attend a near-death education program in my hospital.	*.89	-.11	.08
16. My reactions to near-death phenomena would be different if one of my immediate family reported a NDE.	.30	-.08	.27
17. Patients who survive a cardio-pulmonary arrest should be directly questioned by nurses regarding the occurrence of a NDE.	-.06	-.42	.18
18. It is important for me to be nonjudgmental of what I hear no matter how incredible it may sound.	*.76	-.07	.24
19. Patients who survive CPR should be encourage to report their NDEs.	.19	*.71	-.40
20. Hearing a patient's NDE makes me less afraid of death.	.15	*.66	.05
21. Patients are making up stories when they report their NDEs.	*.74	.04	.16
22. I would like to work with a patient who has had a NDE.	*.74	-.05	-.18
23. Patients' reports of their NDEs should be ignored.	*.62	.49	.35
24. Patients often feel more comfortable if a nurse is present when telling spouses and family of their NDE.	-.17	*.73	.03
25. I would not want to work with a patient who has had a NDE.	*.63	-.05	.42
% variance	29.6	15.1	8.7
cumulative % variance	29.6	44.7	53.4
correlation coefficients > .51 are starred			

test-retest nor equivalent forms of the same test reliability coefficients were calculated. Experts in the disciplines of nursing, sociology, and psychology were used to help establish content validity. Construct validity was established through factor analysis. Cronbach alpha reliability coefficients were obtained to test for internal consistency of the subscales.

Criterion validity could not be established at this time, since there are no previous studies dealing with nurses' knowledge of near-death

phenomena, nurses' attitudes toward near-death phenomena, or nurses' attitudes toward care of patients who have had NDEs. Hence, there are no prior criteria whose relationship to the present instrument can be evaluated.

Because the knowledge level of RNs was unknown, open-ended questions were used to determine whether nurses knew about NDEs, and to ask whether nurses had any questions, thoughts, or feelings brought forth by the questionnaire. These open-ended questions added greatly to the completion time of the questionnaire. Nurses had many questions regarding the relationship between suicide and NDEs and the effect alcohol has on NDEs. Nurses knew the basic elements of the NDE, but not the causes and effects of NDEs.

The revised Near-Death Phenomena Knowledge and Attitude Questionnaire developed in this study consists of demographic questions plus three scales of 23, 23, and 20 items, which respectively measure nurses' knowledge of near-death phenomena, nurses' attitudes toward near-death phenomena, and nurses' attitudes toward patients who had had NDEs. The questionnaire may be used to discriminate among individuals varying in degree of knowledge and attitudes toward NDE; to determine the relationship, if any, between the independent and dependent variables; and to expand the body of knowledge available to nurses who care for critically ill patients. When intensive care nurses have more knowledge available to them about NDEs, they will be able to work more effectively with patients who had had NDEs and their families.

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