

Role of Spiritual Intelligence in Defensive Styles of Nursing Students

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Abstract

Background: Nursing is a demanding and stressful profession and puts the health of nurses at risk. One concept that has always been associated with the word 'anxious' is called defensive style. Sigmund Freud used this term to indicate how people use mechanisms to protect themselves from psychological trauma.

Objectives: This study investigated the role of spiritual intelligence in predicting the defensive style of nursing students.

Methods: This descriptive-survey and correlation study included all nursing students at Shiraz University of Medical Sciences who were studying in the 2012 - 2013 academic year. Of these, 310 were randomly selected by cluster sampling and responded to king spiritual intelligence and defense style questionnaire DSQ-40. The collected data was analyzed using Pearson correlation and simple linear regression.

Results: The findings indicate that a positive and significant relationship exists between spiritual intelligence and its components [critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion] with defense styles ($P < 0.001$). Also, the relationship between spiritual intelligence and its components and neurotic and immature defense styles is negative and significant ($P < 0.001$). Results of the regression analysis showed that spiritual intelligence could positively and significantly predict mature defense styles and could negatively and significantly predict immature and neurotic defense styles.

Conclusions: Based on the results, it can be concluded that students with a higher spiritual intelligence use less neurotic and immature defense styles and more mature defense styles.

Keywords: Intelligence, Defense Style, Nursing, Student

1. Background

Nursing is a burdensome and stressful profession that puts the health of nurses at risk. Nurses, who make up more than 70% of any given healthcare team, spend a lot of time caring for patients and interacting with patients' families (1). To improve the health of their patients, nurses must have sufficient physical and psychological health. Mental health is a part of nurses' clinical competency and is considered by administrators of the healthcare system (2). The specific nature of the profession requires that nurses have high mental abilities such as the ability to effectively control anxiety, because nurses constantly face stressful situations, an integral part of their work environment.

In psychological literature, one concept that has always been associated with the term 'anxiety' is the so-called defense mechanisms. Sigmund Freud used the term in 1936 to show people how to use such mechanisms to protect themselves against psychological trauma. According

to Freud, by denying or distorting the truth, these mechanisms unconsciously help to reduce anxiety and provide a temporary relief for individuals, but are essential to maintaining the integrity of one's character. What makes the problem is the excessive use of this mechanism not just using them (3). One major clinical evaluation regarding this issue is which defense mechanism does one use and to what extent, because the intensive use of specific defense mechanisms are associated with certain disorders (4), and such an evaluation can provide insight into the state of one's health. The study of these mechanisms had been abandoned for years, but recent studies have indicated a renewed interest of psychologists in these components. Anna Freud contributed largely to the development of defense mechanisms. Her efforts led to the defense mechanisms being categorized not only as abnormal psychology, but in some cases with psychological adjustment (e.g., self-observation, altruism, self-assertion, anticipation, sublimation, and humor). According to the fourth edition of the diagnostic and statistical manual of mental disorders

(DSM-IV), these types of mechanisms because they partly permit conscious awareness of feelings and thoughts and their consequences, are compatible (5). Of course, as expected, a lot of them if they use extremely, are incompatible (e.g., displacement, autistic fantasy, splitting, denial, idealization, isolation, and so on). These mechanisms are deeply unconscious and automatic (6). These compatible mechanisms with a variety of titles such as optimism, faith, courage and creativity (as the strengths of individuals) are much discussed in the context of positive psychology (7). Some researchers, such as Vaillant (8), have tried to assess the share of defense mechanisms in positive psychology and in healthy individuals; others like Cramer (9) have said of their use in modern psychology. Several studies have indicated a positive or negative role of these mechanisms in mental health (10-13). Therapists may see that some of these adaptive mechanisms may somehow be related to finding meaning and perspective in life. For example, Freud (14) was aware of the relationship between humor and sense of meaning. This was seen when he tried to provide a meaningful picture to some people about the contents of the unconscious, and they laughed, even when the content was something so horrible that it does not justify any means. Finding meaning, in other words, spirituality is one of the capabilities and power resources of people, the role of which in mental health has been confirmed by various studies (15-20). The definitions of spirituality are very different and not within the scope of this discussion; however, spirituality is usually considered as the personal quest for answers to the ultimate questions about life, meaning, and the relationship with the transcendent, which may occur because of religious growth or even lead to it (21). It includes elements such as sense of purpose, a sense of connection with self, others, nature, God, or something else, a sense of integrity, searching for hope or organization, belief in higher beings and a sense of transcendence, or the feeling that there is something more than material life (22).

People often use spiritual capacity and resources to make important decisions, think of profound existential issues, and try to resolve their daily problems (23, 24). This and the presence of cognitive factors in the structure of spirituality (25) led to the emergence of new structures called SQ (Spiritual Intelligence). If intelligence is the ability to understand and use information and logic in subtle ways (26) or is the ability to adapt to new situations consciously and actively (27), spiritual intelligence is a way to understand deep existential and spiritual problems based on an awareness of a relationship with God, other people, the universe, and with all beings (26) which helps to integrate one's spiritual information with one's external position and helps to achieve adjustment (24). According to

Ghobari Banab et al. (20), spiritual intelligence includes the highest levels of growth indifferent areas, such as cognitive, moral, emotional, and interpersonal relations, and it helps one be in harmony with surrounding phenomena and achieve internal and external unity. It also leads to a general view about life and all the experiences and events, enables one to frame and reinterpret his experiences, and deepens his knowledge and wisdom. Emmons considers spiritual intelligence in 5 components: capacity for excellence, ability to experience deep states of consciousness, ability of holiness up the daily activity, ability to use intellectual resources and capacity to solve problems of piety and virtue (23). According to Manavi, SQ includes skills such as superior self-awareness (awareness of the world view of self, awareness of the purpose of life, etc.), general knowledge (knowledge of interconnection of all life, awareness of others' worldviews, etc.), the higher ego/leadership superego (commitment to spiritual growth, maintaining superego in responsibility, etc.), and the presence of spiritual/community leadership (compassion and judgment awareness, peace, and safety) (24).

Yang assessed the spiritual intelligence of nurses as average in 2006 (28). Kaur, Sambasivan, and Kumar studied the impact of spiritual intelligence on the behavior of nurses and concluded that spiritual intelligence can improve nurses' behavior (29). Emmons reported that high spiritual intelligence makes people respond better to treatment when faced with injuries and more appropriately deal with the injuries (23). Iranian researchers have also investigated the role of factors such as emotional intelligence (30) and personality traits (31) in defense mechanisms and have confirmed positive and significant relationships between them and defense mechanisms; generally, however, researchers have not done so much studies about the defense mechanisms and research into the relationship between spirituality and defense mechanisms was not found, although numerous studies on the relationship between intellectual intelligence and other components have been done. For example Saheb-al-zamani et al. examined the relationship between spiritual intelligence and psychological well-being and purpose in the lives of nurses and came to the conclusion that spiritual intelligence can improve the psychological well-being of nurses, resulting in better care for patients (32).

Often, nursing research focuses on working people, and nursing students receive little attention, yet such students require special clinical competence for employment in the nursing profession (20). It is often said that prevention is better than cure, and effective prevention is not possible except with an understanding of the psychological status of these individuals.

2. Objectives

This research purposed to determine the role of predictive intelligence as a powerful psychological resource in the mechanisms and defensive styles of nursing students. The research questions were: Is there a significant relationship between spiritual intelligence and defensive style? Can spiritual intelligence significantly predict defensive style?

3. Methods

This study is a descriptive and correlational research in which spiritual intelligence was considered as the predictor variable and defensive style as the criterion variable. The study sample consisted of nursing students attending Shiraz University of Medical Sciences in the 2012 - 13 academic years of which 310 were selected through random cluster sampling method for participation in this study. There are about 800 nursing students at Shiraz University of Medical Sciences, and the sample criterion for selection was Morgan and Krejcie's Based Based on population, 260 students should have been chosen, but to raise the validity of the research and eliminate the effect of sample loss, the sample population was increased to 310. After describing the research objectives and attracting the participation and cooperation of participants, spiritual intelligence and defense style questionnaires were distributed among the participants. The main form of the spiritual intelligence questionnaire consists of 83 items; this study used the short form, which contains 24 items (33). This 24-item scale created by King consists of four dimensions that include critical existential thinking, production of personal meaning, creating of personal meaning, and expansion of consciousness state. According to a five-point scale, each dimension was rated from strongly agree (4) to strongly disagree (0). It should be noted that the Likert scale is an ordinal or distance scale and does not have an absolute zero, and based on the theoretical foundations degree zero can't be used. Since this is a standard questionnaire, the current research was conducted in the same manner. The total score of the scale was obtained from the total scores of the material. The reliability of total score and subscales based on Cronbach's alpha coefficient were reported as 0.95, 0.88, 0.87, 0.89, and 0.94, respectively (34). Zahed, Babolan, and Moinikia (35) obtained validity scores for this test based on Cronbach's alpha of 0.87 for the total test and 0.68, 0.71, 0.63, and 0.61 for each subscale, respectively. It is worth mentioning that this study considered the total score. The defensive style questionnaire (DSQ-40) introduced by Andrews et al. in 1993 has 40 questions on

a 9-point Likert scale (from strongly agree to strongly disagree) and 20 defensive mechanism questions evaluated at three levels: developed, neurotic, and immature (36). In another study, the Cronbach's alpha coefficient of questions of each style (mature, immature, and neurotic) were respectively, 0.75, 0.73 and 0.74, and is reported to have indicated satisfactory internal consistency for the Iranian form of the defense style questionnaire. The defense style questionnaire retest coefficient was 0.82 (37). Criteria for the study included: 1) student nurses 2) no history of mental disorders. Exclusion criterion of the study was withdrawal of the student from the ongoing investigation. The collected data was analyzed using SPSS software (version 18) and, according to descriptive statistics (mean and standard deviation) and inferential statistics, Pearson correlation coefficient and simple linear regression methods.

4. Results

Descriptive data of the research is reported in Table 1. The mean and standard deviation scores of spiritual intelligence were 58.64 ± 13.24 . Also, mean and standard deviations of mature, immature, and neurotic styles developed were obtained as 34.21 ± 8.40 , 110.17 ± 23.31 , and 34.27 ± 7.68 .

Table 1. Descriptive Information of Research Variables

| Statistics Variables | S.E | Mean |
|---------------------------------|-------|--------|
| Critical thought | 4.61 | 17.78 |
| Making personal meaning | 3.52 | 12.54 |
| Transcendental consciousness | 4.11 | 16.12 |
| Expanded state of consciousness | 3.37 | 12.2 |
| Spiritual Intelligence | 13.24 | 58.64 |
| Mature style | 8.40 | 34.21 |
| Immature style | 23.31 | 110.17 |
| Neurotic style | 7.68 | 34.27 |

To answer the research question of whether there is a significant correlation between spiritual intelligence and defensive style, the Pearson correlation coefficient was used. The results shown in Table 2 indicate that there is a significant positive correlation between mature defensive style and spiritual intelligence and its components ($P < 0.001$). In fact, every person with a higher spiritual intelligence is more likely to use a mature defensive style. Additionally, the correlation between immature and neurotic defense styles with spiritual intelligence and its components were negative ($P < 0.001$), indicating that people

who use an immature or neurotic defense style are more likely to have lower spiritual intelligence.

To answer the second question of whether spiritual intelligence can significantly predict defensive style, regression analysis was used, and the results are shown in Tables 3, 4, and 5. As seen in Table 3, SQ explains 5% of the variance in mature defensive style which, based on the results of the analysis of variance regression, is significant ($P < 0.001$; $F = 16.66$).

Also according to Table 4, spiritual intelligence can explain 14% of immature defense style changes, which is significant due to the amount of the F statistic ($P < 0.001$; $F = 50.13$).

According to Table 5, spiritual intelligence can explain about 5% of the neurotic defense style, which is a statistically significant value ($P < 0.001$; $F = 15.91$).

5. Conclusion

As mentioned earlier, nursing is a stressful and challenging profession that requires specific capabilities such as maintaining morale, problem solving, and crisis management. Spiritual intelligence is an understanding of the deep spiritual meaning of issues and indicates an awareness of a relationship with God, other human beings, the universe, and all creatures (26); moreover, it helps people to use spiritual resources in solving their problems. It can be expected that spiritual intelligence will influence the behavior of people in stressful and challenging circumstances. One routine behavior to protect oneself in such situations is the use of defense mechanisms. This study showed that spiritual intelligence and its components (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion) have a significant and positive relationship with a mature defensive style and a significant negative correlation with immature and neurotic defense styles. Spiritual intelligence is able to predict 14% of variance in an immature defense style, 5% of the variance in a mature defensive style, and, similarly, 5% of a neurotic style. Although the forecasting of mature and neurotic defense styles by spiritual intelligence is not very high, the ability of spiritual intelligence to predict an immature defense style is fairly good. One factor that can affect spiritual intelligence and defense mechanisms, perhaps, is that spiritual intelligence involves different aspects of consciousness, including higher consciousness (awareness of one's own world view, the purpose of life, the hierarchy of values, the complexity of internal thinking, and awareness of oneself/superego) and general knowledge (knowledge of the interconnection of all life, knowledge of the world views of others, awareness of the limitations/power of human

perception, and awareness of spiritual laws) (24). With intensive use of immature and neurotic defense mechanisms which help individuals remain ignorant of facts, the skills seem to be in contradiction. This research may align with studies that have confirmed the role of spiritual intelligence in mental health (32). It has also shown that people with a high spiritual intelligence concerning reality, such as illness or injury, accept reality better (24), because accepting the facts certainly contradicts mechanisms such as denial. All components of spiritual intelligence, including critical existential thinking, personal meaning production, making personal meaning, and conscious state expansion, require engaging and dealing with reality and challenge it. In fact, spiritual intelligence provokes a sense of curiosity and desire in a person to explore different aspects of events and phenomena and encourages him to learn more, provide grounds for reinterpreting events (20) and solve problems with the resources and intellectual capacity that constitute the nature of spiritual intelligence (26). This does not match with the immature and neurotic defense styles in which, only by avoiding and denying reality does a person achieve temporary relief. As for the relationship between spiritual intelligence and mature defense mechanisms can also be said since these mechanisms allow somewhat conscious awareness of feelings and thoughts and consequences (5), again it can be referred to the role of spiritual intelligence in awareness and consciousness. On the other hand, with a mature defensive style, a form of meaning construction, perspective-taking, and altruism (5) can be observed which spiritual intelligence facilitates by fostering empathy and caring behaviors (23). Spiritual intelligence assists one in coordinating things around her to achieve internal and external integration (20). To achieve this inner unity, defense mechanisms and particularly the types of adaptation to them are essential to the integrity of one's character (3). Spiritual intelligence, through the strengthening of curiosity, critical thinking, and openness to new experiences, can subsequently be grounds for a creativity and sublimation defense mechanism (5). The results of the current study are consistent with those of Sambasivan and Kumar (29). They approved the role of spiritual intelligence in increasing nursing care behaviors. It can be said that people with a higher spiritual intelligence are somehow equipped against a lot of damage and problems. The events that bring spirituality also make people psychologically stronger and significantly reduce their vulnerability. For example, people who have a higher spirituality find more meaning, hope, and self-awareness in their lives that help them cope effectively and use mature defense mechanisms in various situations, particularly tension-filled ones. In particular, it can be said that spirituality

Table 2. Results of the Correlation Between Variables

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------------------------|----------------|-------------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1. Critical thinking | | | | | | | | 1 ^a |
| 2. Create a personal meaning | | | | | | | 1 ^a | 0.56 ^a |
| 3. Transcendental consciousness | | | | | | 1 ^a | 0.59 ^a | 0.65 ^a |
| 4. Expanded state of consciousness | | | | | 1 ^a | 0.64 ^a | 0.62 ^a | 0.62 ^a |
| 5. Spiritual Intelligence | | | | 1 ^a | 0.83 ^a | 0.86 ^a | 0.81 ^a | 0.86 ^a |
| 6. Grown style | | | 1 ^a | 0.23 ^a | 0.20 ^a | 0.25 ^a | 0.17 ^a | 0.15 ^a |
| 7. Immature style | | 1 ^a | 0.04 | -0.37 ^a | -0.33 ^a | -0.27 ^a | -0.39 ^a | -0.29 ^a |
| 8. Neurotic style | 1 ^a | 0.64 ^a | 0.10 | -0.22 ^a | -0.19 ^a | -0.22 ^a | -0.17 ^a | -0.16 ^a |

^aP < 0.001.**Table 3.** Results of Regression Analysis with Mature Defense Style Criterion Variable

| Statistics Variables | Not standardized Coefficient (B) | S.E | Standardized Coefficient (β) | T Statistics | Significance Level (P) | R2 |
|------------------------|----------------------------------|------|--------------------------------------|--------------|------------------------|------|
| Fixed amount | 25.64 | 2.15 | - | 11.92 | 0.001 | 0.05 |
| Spiritual Intelligence | 0.14 | 0.03 | 0.23 | 4.08 | 0.001 | |

Table 4. Results of Regression Analysis with the Criterion Variable Immature Defense Style

| Statistics Variables | Not Standardized Coefficient (B) | S.E | Standardized Coefficient (β) | T Statistics | Significance Level (P) | R2 |
|------------------------|----------------------------------|------|--------------------------------------|--------------|------------------------|-------|
| Fixed amount | 149.34 | 5.67 | - | 26.33 | 0.001 | 0.144 |
| Spiritual Intelligence | -0.66 | 0.09 | 0.37 | -7.08 | 0.001 | |

Table 5. Results of Regression Analysis with the Criterion Variable Neurotic Defense Style

| Statistics Variables | Not Standardized Coefficient (B) | S.E | Standardized Coefficient (β) | T Statistics | Significance Level (P) | R2 |
|------------------------|----------------------------------|------|--------------------------------------|--------------|------------------------|-------|
| Fixed amount | 41.93 | 1.96 | - | 21.30 | 0.001 | 0.051 |
| Spiritual Intelligence | -0.13 | 0.03 | 0.22 | -3.99 | 0.001 | |

means that, for individuals who believe in God who has created the universe, life has meaning. Therefore, they act purposefully, are hopeful about the future, and are aware of themselves and their surroundings. People who do not have these characteristics use immature and neurotic defense mechanisms, particularly in the nursing profession where one works in an environment in which one is invariably confronted with a variety of stressful environmental conditions. Nursing students who hope to enter the nursing profession in the near future will require characteristics that help them cope appropriately with different environmental conditions in different situations. Spirituality is one of the important factors that could make them more capable in terms of psychological traits. Using mature defense mechanisms rather than immature and neurotic ones will help them do better in a stressful hospital environment and ultimately be successful in their jobs and will result in greater patient satisfaction.

rotic ones will help them do better in a stressful hospital environment and ultimately be successful in their jobs and will result in greater patient satisfaction.

This study once again confirms the importance of spirituality as an important source in one's personal and professional life. Spiritual intelligence is an important issue in spirituality; as an ability and acquired skill, it can be effective toward a successful career for nursing students. Of course, such kind of research that focuses on the prevention of occupational problems of nursing students can be performed in nurses and is helpful.

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Footnotes

Authors' Contribution: We ask authors to describe what each author contributed, and these contributions to the work may be published at the editor's discretion; study concept and design: Fortes, Melchi, and Abeni; analysis and interpretation of data: Fortes, Mastroeni, and Leffondre; drafting of the manuscript: Fortes; critical revision of the manuscript for important intellectual content: Mastroeni, Leffondre, Sampogna, Melchi, Mazzotti, Pasquini, and Abeni; statistical analysis: Fortes and Mastroeni; Yoon Kong Loke developed the original idea and the protocol, abstracted and analyzed data, wrote the manuscript, and is guarantor; Deirdre Price and Sheena Derry contributed to the development of the protocol, abstracted data, and prepared the manuscript.

Conflict of Interest: To prevent the information on potential conflict of interest for authors from being overlooked or misplaced, mention this information in the cover letter. Authors must identify any potential financial conflicts of interest before the review process begins. Declared conflict of interest will not automatically result in rejection of paper but the editors reserve the right to publish any declared conflict of interest alongside accepted. The following would generally be regarded as potential conflicts of interest: 1, direct financial payment to an author for the research or manuscript production by the sponsor of a product or service evaluated in an article; 2, ownership of shares by an author in the company sponsoring a product service evaluated in an article (or in a company sponsoring a competing product); 3, personal consultant for companies or other organizations with a financial interest in the promotion of particular health care products and services.

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