PERSONALITY PROFILE OF THE NURSE AS A PREDICTOR FOR DEVELOPMENT OF ANXIETY AND DEPRESSIVE DISORDERS

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Abstract

Background: Stress is one of the main factors affecting nurses’ personality profile with others psychiatric distress of depression and anxiety as well as neuroticism and emotional stability profile. Aim: This study aimed to examine the influence of personality traits on the development of depressive state and Anxiety distress among nurses. Subjects and Method: Descriptive correlational design was used: (102) nurses in El-Mahala General Hospital were choosing according to inclusion criteria. The instruments used for data collection were, socio-demographic data sheet, the Eysenck personality inventory test (EPI)-57 and Depression Anxiety Stress Scale DASS-21. Results: revealed that there was a statistical significant relation of personality profile and psychological distress. Conclusions: most common personality profile of the nurses was introversion neuroticism with positive correlation between anxiety, depression and stress disorders. Key words: Nurses, Personality profile, Psychological distress.

Introduction:

Nursing jobs promote health, prevent disease and help patients cope with illness; also collaborate with all members of the health care team to provide the care needed for each patient. They develop and manage nursing care plans and instruct patients and their families in proper care, moreover nurses help whole communities by teaching individuals how to take steps to improve or maintain their health, using effective support. The American Association of Colleges of Nursing (2018)

Nurse is the member of supportive community, think quick to get right decision to save patient life, , sometimes have little or no breaks through a day, to induce high-quality behavioral health services and crisis intervention. (Chapman ,et al., 2018) Moreover the nurse complains of physical and mental imbalance that prone to emotions such as stress which affected their work, so succeed work urged nurse educators to identify nurses’ competencies (Jennings , et al., 2007).

Nurses of seeing people die during a normal day at work struggle with anxiety and depression (Kati Kleberg, et al., 2014) that feeling inadequate or incompetent at change of shift make it difficult to give report, not being able to complete all tasks in time while dealing with patients & multiple others to take care and responsible for restarting work (Rowell 2016).

Personality profile refer to the character balance of Personality trait which defining as individual differences.
in the way people tend to think, feel and behave. Attempting to understand and classify what makes people who they are on overall mood. Theories and models have been developed over the years to better understand aspects of human personality and accurately describe aspects of it. (Cacioppo, et al., 2017)

The personality profile of nurses having different view might be less judgmental of a patient’s lifestyle choices, deals with self-regulation and impulse control as well as the personality trait of extroversion explains a person’s connection with the world, while introverts depend on their thoughts and feelings too, but the neuroticism personality trait deals with emotional effects. Nurses who score high in the neuroticism trait are emotionally reactive and sensitive to stress. (Kennedy, et al., 2014).

Associations between the personality traits and specific depressive, anxiety disorders, which may related to neuroticism but more elevated on disagreeableness that displayed weaker links to all traits.( Clark, et al., 2003) Studies have examined their links with personality trait showed that neuroticism is negative emotionality while the extraversion is positive emotionality as same of conscientiousness, agreeableness, and openness. (Kotov, et al., 2010)

An essential part of the profile to nursing profession is performance or absenteeism on working. (Zhao, et al., 2008) There for staff reductions make the workload harder for the nurses, who remain, and mandatory overtime can add to psychological and physical toll therefore hospitals and other institutions need to know how to motivate their nurses to keep them from anxiety and depressive disorders. (Kelly, et al., 2010)

Significance of the Study:
The model of anxiety and depression has played role in shaping work on the associations between personality and psychopathology, according to this both defined by high levels of negative affect, for that indicates the importance of research to examine the correlation of personality profile and multiple disorders related to nurses' work. (Bienvenu, et al., 2004).

Aim of the Study:
This study aims to examine the influence of personality traits on development of depressive state and Anxiety disorders among nurses.

Research Question:
The research questions of this study were as follows:
Q1: What are the different types of personality profiles of the nurse?
Q2: Is there a relation between personality profile and depression or anxiety development among nurses?

Subjects and Method:
Design of the study:
Descriptive- correlation design was used. Setting: This study was conducted in El- Mahala general hospital, which affiliated to the Ministry of health. El-Mahala general hospital is the largest governmental hospital in El-Mahala include larger number of nurses with different qualification and specialist's. Subjects:
A total subject composed of 102 nurses who are distributed to three shifts equally 34 shift is fulfilling the following criteria:
Inclusion criteria:
1-Gender: both sexes
2- Age: 20-60 years
3-Willingly to participate in the study
Tools for data collection:

Using the following tools to collect the information of subjects study.

**Tool 1 - socio - demographic data sheet:**

Specific Sheet was designed in Arabic language by the researcher for collection to the socio demographic data of the subject including: age, address, residence, sex, educational level, and marital status.

**Tool II - Assessment of the personality by Eysenck (1964) (EPI) 57: the Eysenck personality inventory test.**

The scale was originally developed by Eysenck H & Eysenck S (1997) the EPI is a 57 item translated by (Abdul – khaliq 1991). Test validity and reliability used for assessing the personality traits as important depositions toward feeling and behaviors. Two items of personality: Extroversion - Introversion and Neuroticism –Emotional stability, contain Yes-No with no repition. Traits subscales to measure: Extroversion –Emotional stability, Extroversion –Neuroticism, Introversion –Emotional stability, Introversion -Neuroticism. The ‘lie score’ is out of 9, which 5 score or more reflecting imitation .likert scale of extrovert out of 24 also scale of neurotic out of 24.

**Tool III-The Depression Anxiety Stress Scale 21 (DASS).**

This scale was developed by Lovibond and Lovibond (1995), was translated into Arabic language by Taouk (2001) DASS-21 validated a well-established instrument for measuring depression, anxiety and stress. Cultural variation may influence the individual’s experience and emotional expression.Clinical cut off for depression: normal 0-4 mild 5-6 Moderate 7-10 while Severe 11-13 and extremely severe 14+, also Clinical cut off for anxiety: normal 0-3 mild 4-5 ,Moderate 6-7, Severe 8-9 while extremely severe 10+ in addition to that Clinical cut off for stress: normal 0-7 mild 8-9, Moderate 10-12 while severe 13-16 but extremely severe 17+.

**Ethical considerations**

*An official permission to conduct the study was obtained from the research ethical committee of the faculty of Nursing Mansoura University that give permission to conduct the study after reviewing all ethical considerations.

*A letter from the dean of the faculty was sent to the hospital director, also nurse manger in El-Mahala general hospital to inform about the study & time of data collection in order to help and facilitate carrying out the study.

*Every nurse Participated in the study gave consent of approval for participating in the study after explaining the aim and assuring confidentiality and privacy for them. Their right to withdraw at any stage of the study at any time without giving any reason and without any effect was assured that the study posed no risks or hazards to them.

**Operational design**

Operational design includes three stages, namely the preparatory stage, pilot study and field work:

*Preparatory stage:

The intended tools of data collection were revised by the researcher, and got supervisor’s approval.

*Pilot study:

A pilot study was carried out on 10 nurses to test the visibility and clarity of tools before starting the clinical data collection. It also aimed at estimating the duration for completion of each assessment tools. The result of the pilot study indicated that each tool will be
completed within average of 20 to 30 minutes, so no further modifications were suggested. The tool became ready for testing.

**Filed work:**

The process of data collection was carried out through six months started from 30 October 2016 to 30 April 2017. Data collection was carried out weekly from medical, surgical and intensive care units (ICUS) in El-Mahala general hospital after explaining the objectives of the study.

**Statistical analysis data:**

Upon completion of data collection, data were tabulated and analyzed using statistical package for social science (SPSS) program version 22. Relevant statistical analysis was used to test the obtained data. Descriptive and inferential statistics were done such as mean and standard deviation: frequency, percentage, chi square test and logistic regression, the level of significant was considered at the 5% level (P=0.05), expected count less than 5 Fisher (P<0.05)

**Results:**

Table 1 demonstrates that the age of (58.82) % of the study subjects was ranged from age 20 to less than (31) years old. Were almost females (98.03) %, more than half of them (53.9) % were living in rural areas, the majority of them (86.2) % were married. More than half (50.9) % have high baccalaurean degree, while the majority (78.03) % haven't enough salary.

Figure 2 shows that (24.50) % were have extremely severe depression, followed by (21.56) % with moderate depression. As regard subjects (22.54) % was have extremely severe anxiety followed by moderate anxiety with subjects (20.58) %. In relation to stress, subjects (26.47) % have moderate stress followed by mild stress (18.62) % present then severe stress have (17.64) % but only (7.84) % have extremely stress.

**Figure (3)** demonstrates that more than two third of studied subjects (64.7)% have Introversion – Neuroticism of the personality traits followed by (24.5) % were Extroversion – Neuroticism of personality traits, also (5.9) % were Introversion – Emotional stability but only (4.9) % were Extroversion – Emotional stability.

Table 4 It is clear from tabling that there was statistically significant P=0.012 relations between personality and marital status indicated that majority subjects (86.3) % was Introversion Neuroticism of personality type were married. There is also highly statistically significant positive relation between educational level and personality types, score among studied subjects P=0.002 where (59.0) % revels that more than half of nurses where Introversion – Neuroticism whom are in high university of the nursing.

**Figure (5)** revealed that there is statistically significant p= (0.048) between personality type and level of depression. Although two third of the subjects (60%) were extroversion emotional stability of personality type without depression, other indicates that personality type of extroversion neuroticism predictor of severe depression disorder with more than quadrant of subjects (28) %, while half of subjects (50) % of personality type to introversion emotional stability but also subjects (21.21) % were introversion neuroticism with mild depression.

**Figure (6)** revealed that there is statistically significant p=0.041 between personality type and level of anxiety. Although two third of the subjects (60%) were extroversion emotional stability of personality type without anxiety, other indicates that is third of the subjects (32)
PERSONALITY PROFILE OF THE NURSE AS etc…

% extremely severe anxiety with extroversion neuroticism, while introversion emotional stability founded subjects with (33.33) % with moderate anxiety equal to third present of extremely severe anxiety, predictor of anxiety disorder ,also subjects (33.33)% of introversion neuroticism with extremely severe anxiety which shows that is a predictor of relation between neuroticism and anxiety disorder.

Figure (7) revealed that there is statistically significant $p=0.048$ relation between personality type and level of stress. Although two third of the subjects (60%) were extroversion emotional stability of personality type without stress, other indicates that is more than quadrant to subjects (28) % of extroversion neuroticism with mild stress ,while subjects (16.66)%of introversion emotional stability with severe stress ,also third introversion neuroticism were with extremely severe stress of subjects (31.8)% founded a predictor of stress disorder.

Table (8) delineates that there was highly statistically significant positive correlation among subjects where $P<.001$ between levels of (depression, anxiety, and stress) and personality profile of Neuroticism –Emotional stability without correlation to Extroversion – Introversion.

Discussion:

Regarding the socio-demographic status: Concerning the gender, the results of this study demonstrated that almost studied subjects were females with percentage (98.03) % .the findings are supported with U.S. Department of Labor (2010) found that nurses are projected to increase in total carrier growth between 2008 and 2018 were female that larger percentage of those employed(91)%.

As regard to age , results revealed that more than half of the studied subjects aged from twenty to thirty one years, the minority of subjects were aged from forty one to fifty one . Results agree with ) Ndaikile , et al., 2018) who showed that, the majority of the nurses were aged between 20 and 30 years and predominantly female, because of the most of the nurses enroll for training straight from graduation and enter into practice at a relatively young age.

While regarding the marital status, study illustrated that, the majority subjects of the nurses were married. Agree with (Change , et al.,2005) reported that elevation of married nurses for social life transformation, within secure job or economic pressures moved forward job market. As same as D'Antonio (2007).

Regarding educational level, the studied subjects revealed that half of the subjects who graduated from university; this indicated that nurse's choice career of university studies which influence on the working lives and reflections on skills, analytical of thinking. Agree with( Wright , et al ., 2015) ,reported that the reasons of high nursing education attend to emotional social and personal growth are encapsulated in baccalaureate learner profile, fostering skills of thought and creativity in educational experience and social values with views of culture.

According to the salary, the majority of the subjects hasn't enough income; this result founded that poor salaries of nurses have received much attention from complains of governmental policy of salary that is risk of decreasing from punishment but rising only at annually rewarding rather than a private hospitals with in favorite policies and good offers .Agree with several studies as ( Fochsen , et , al 2005) showed that unsatisfactory salary contributed to the
most nursing personnel's decision to leave job and looking for opportunities at other workplaces with good salary.

Additionally in contrast with (Bahnassy, et al., 2014) reported that almost of studied nurses were satisfied with their job income, these differences in results may be related to different cultures, believes, policies of setting.

Regarding distribution of the subjects according to personality types, the study results attributed that, two third of the subjects having personality profile of introversion neuroticism, while small subjects to nurses with emotional stability. agree with (Bara et al., 2009) mentioned as there is a large number of non-responders of nurses were neurotic profile with character of sadness, rigid and anxious, shown serious psychiatric disorders to be more prevalent.

According to the relation, there was statistical significant relation between personality type and educational level which found that two third of subjects who graduated from university with personality type of introversion neuroticism with profile of moody and anxious about work position, while subjects who graduated from school of nursing with extroversion emotional stability were lively and responsive and less stressed than bachelor degree nurses whose worrying and dissatisfied.

Supported study result with (Spetz, et al., 2013) reported that all nurses entering the profession with a baccalaureate degree were neurotic, worrying and complains of job dissatisfaction as needs to be manager or a head nurse, so remainder to joined the profession after completing another type of education program of post graduate-level education. These results were in contrast with (Jaradat, et al., 2012) who stated that diplomat degree nurses were more likely to be stressed and anxious in profiling than bachelor degree nurses because of weak chance to be manger.

Regarding to the relation between marital status and personality profile. Results founded that there was a highly statistically significant relation between married female nurses and the profile of introversion neuroticism personality with profile of moody, anxious and rigid, sometimes quit. Indicated that double work of women's responsibilities with mother role lead to more stress and sense of anxiety and depression but, may decreased in way of social supports to be quit. agree with (Fang, et al., 2014) reported that married female nurses, had to face paid hospital work and unpaid home life work with complex interpersonal relationships of heavy workloads and over time work leads to conflicts.

Regarding to the relation between personality profile and psychological distress, result found relation between personality profile of neuroticism and depression, stress and anxiety distress. A similar to this finding, Schoenly (2018) reported that, a nurse with a high level of this personality trait of introversion might be less active to patient’s condition and impulse control; moreover the nurses who score high in the neuroticism trait are emotionally reactive and sensitive to stress.

Also (Tiwari, et al., 2009) showed that the extroverts depend on external environment all the time but face situations where the solution to problems learn to save themselves from a lot of anxiety, restlessness while introverts depend on their thoughts and feelings, a greater risk of falling into depression because of particular habit to isolate themselves.
Conclusion:

Based on the findings of the present study, it can be concluded that the majority of nurses have positive psychological distress and there is a statically significant relation between personality profile of the nurses and educational level, marital status. The most common personality profile of the nurses were introversion neuroticism. Could be concluded that there was a statistically significant relationship between personality profile of the nurses and development to depressive, anxiety and stress disorders, in addition to that there is a negative correlation between Extroversion - Introversion personality profile and total DASS (depression, anxiety, stress) but there is a positive correlation between Neuroticism (psychoticism) and total DASS.

Recommendation:

*The training programs of stress management should be implemented in the hospital for nurses to enhance their emotional and mood with early detection of distress and protection from psychiatric disorders.
*Integrate educational courses as workshop to increase awareness and sensitive response about, how to adapt with stressful situation related to jobs, self-assessment and asking for help.
*Annual psychiatric evaluation to nurse's especially new graduate nurses about orientation and rehabilitation.
*Discuss the personality profile of the nurse in workshop to maintain ideal and developed personality profile of human resources related to nurses.
*Put programs about factors that affect nurse performance, training opportunity, job security, and policies and procedures for rewarding and avoiding anxiety.

*Motivate nurse performance through different process monthly in nursing report plan to achieve some specific goal of psychological rewards and protection from depression.

Table (1) Socio-demographic characteristics of the studied subjects: (n: 102)

<table>
<thead>
<tr>
<th>Socio-demographic characteristics</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20: (&lt;31)</td>
<td>60</td>
<td>58.82</td>
</tr>
<tr>
<td>31: (&lt;41)</td>
<td>34</td>
<td>33.33</td>
</tr>
<tr>
<td>41: (&lt; 51)</td>
<td>6</td>
<td>5.88</td>
</tr>
<tr>
<td>51 : 60</td>
<td>2</td>
<td>1.96</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>31.38 (7.17)</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>47</td>
<td>46.07%</td>
</tr>
<tr>
<td>Rural</td>
<td>55</td>
<td>53.93%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>1.96</td>
</tr>
<tr>
<td>Female</td>
<td>100</td>
<td>98.03%</td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
</tr>
<tr>
<td>Single</td>
<td>12</td>
<td>11.7</td>
</tr>
<tr>
<td>Married</td>
<td>88</td>
<td>86.2</td>
</tr>
<tr>
<td>Divorced</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Education level</td>
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<td></td>
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<tr>
<td>Secondary Nursing school</td>
<td>15</td>
<td>14.7</td>
</tr>
<tr>
<td>Technical Institute of nursing</td>
<td>34</td>
<td>33.3</td>
</tr>
<tr>
<td>University &quot;High&quot;</td>
<td>52</td>
<td>50.9</td>
</tr>
<tr>
<td>Post graduated</td>
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<td>.9</td>
</tr>
<tr>
<td>Monthly income</td>
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</tr>
<tr>
<td>Enough</td>
<td>22</td>
<td>21.7</td>
</tr>
<tr>
<td>Not Enough</td>
<td>80</td>
<td>78.3</td>
</tr>
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</table>
Figure (2): frequency distribution of DASS levels among the studied subjects.

Figure (3): frequency and percentage distribution of the personality types according to Eysenck. n=102

Table (4) Relationship between sociodemographic data and types of personality of the studied subjects.

<table>
<thead>
<tr>
<th>Socio-demographic characteristic</th>
<th>Extroversion - Emotional stability N=5</th>
<th>Extraversion - Neuroticism N=25</th>
<th>Introversion - Emotional stability N=6</th>
<th>Introversion - Neuroticism N=66</th>
<th>Test of Sig.</th>
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<td>Age in years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20(≤ 31)</td>
<td>1</td>
<td>20</td>
<td>19</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>31:(≤ 41)</td>
<td>4</td>
<td>80</td>
<td>5</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>41:(≤ 51)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>51:60</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>3</td>
<td>60</td>
<td>10</td>
<td>40</td>
<td>5</td>
</tr>
<tr>
<td>Rural</td>
<td>2</td>
<td>40</td>
<td>15</td>
<td>60</td>
<td>1</td>
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<td>Marital status</td>
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<td></td>
</tr>
<tr>
<td>Single</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Married</td>
<td>4</td>
<td>80</td>
<td>21</td>
<td>84</td>
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<td>0</td>
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<td>2</td>
</tr>
<tr>
<td>Education Level</td>
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<td>1</td>
<td>20</td>
<td>4</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Technical Institute of nursing</td>
<td>1</td>
<td>20</td>
<td>14</td>
<td>56</td>
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<td>University &quot;High&quot;</td>
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<td>3</td>
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<tr>
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<td>20</td>
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<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Monthly income</td>
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<td></td>
</tr>
<tr>
<td>Enough</td>
<td>2</td>
<td>40</td>
<td>8</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>Not Enough</td>
<td>3</td>
<td>60</td>
<td>17</td>
<td>68</td>
<td>4</td>
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</table>
Figure (5) Relationship between Types of personality and level of Depression. N=102

Figure (6) Relation between Types of personality and level of anxiety. N=102

Figure (7): Relation between Types of personality and level of Stress. N=102

Table (8) correlation to studied variables of nurses n=102

<table>
<thead>
<tr>
<th></th>
<th>Total DASS</th>
<th>Depression Score</th>
<th>Anxiety Score</th>
<th>Stress Score</th>
<th>Extroversion – Introversion</th>
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<tbody>
<tr>
<td>Depression Score</td>
<td>0.853</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
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</tr>
<tr>
<td>Anxiety Score</td>
<td></td>
<td>0.810 0.573</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Stress Score</td>
<td></td>
<td>0.823 0.582 0.496</td>
<td>&lt;0.001 &lt;0.001</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Neuroticism – Emotional stability</td>
<td></td>
<td>0.417 0.342 0.390</td>
<td>&lt;0.001 &lt;0.001</td>
<td>&lt;0.001</td>
<td>0.076</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>
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