

Full Length Research Paper

Personality traits and emotional intelligence among health care professionals in a tertiary hospital

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Emotional Intelligence (EI) is considered fundamental to get along with others in the workplace. The dearth of literature on personality traits and EI among healthcare professionals calls for concerns. Therefore, this study examined personality traits and emotional intelligence among healthcare professionals in a tertiary hospital in Maiduguri. A cross-sectional survey design was adopted, and an accidental sampling technique was employed to select 91 healthcare professionals with mean (1.3) age and Standard Deviation (0.46). Hierarchical regression analysis and t-test for independent measures were used, in step one of the regression, age significantly predicted EI ($\beta = -0.27$, $t = -2.46$, $p < 0.05$). Further t-test analysis to know the direction of the predicted variable (age) on EI showed that younger healthcare professionals are higher on EI [$t(89) = 2.44$, $p < 0.05$] than their counterpart. In step 2, psychoticism predicted EI in such a way that EI increases with a decrease in psychoticism trait ($\beta = -0.33$, $t = -3.01$, $p < 0.05$). In conclusion, personality traits predict EI among healthcare professionals, also, being low on psychoticism traits and younger age predicted EI. It is therefore recommended that EI screening should be an essential prerequisite for recruiting healthcare professionals and subsequently, healthcare professionals that are young, soft-minded, empathetic, less aggressive and impulsive should be allowed to handle those professionals issues that are highly emotional or sensitive in workplace.

Key words: Emotional intelligence, healthcare professionals, personality traits.

INTRODUCTION

Hospital is a service organisation, and heterogeneous setting with a variety of clinical specialties working

towards a common goal through frequent interactions among healthcare professionals (formal caregivers),

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patients and patient's relatives (informal caregivers). In most cases, healthcare professionals find themselves directly or indirectly involved in a situation where they have to treat or communicate the outcome of their intervention to the patients and their relatives (Ptacek and Eberhardt, 1996). Most often during the interactions, emotional expressions may be misunderstood by either of the parties, and this may lead to interpersonal problems. To avoid these kinds of misunderstandings in workplace, high Emotional Intelligence (EI) is needed because EI as an integral part of humanity cannot be separated from the workplace where series of professional relationships and interaction takes place.

Emotional intelligence is the concept, which is currently in focus among the public, medical practitioners and researchers. It is being widely believed by the public that emotional and social competence is as important, or even more important, than the traditional dimension of intellectual ability and personality. EI is defined as "the composite set of capabilities that enable a person to manage himself/ herself and others" (Goleman, 1995, 1998; Mayer et al., 2000). Similarly, Goleman (1998) sees EI as the ability to acknowledge one's feelings and emotions and also those of others.

EI has five components which are: self-awareness, self-regulation, motivation, empathy and social skills. The first component of emotional intelligence is self-awareness which implies that people who are high on it know how their feelings affect them, others and their job performance (Goleman, 1995). The second component of emotional intelligence is self-regulation. People with a high level of self-regulation do not make bad decisions because they are in control of their emotion; self-regulation help individuals make thoughtful decisions. The third component of emotional intelligence is motivation, which extends to the deep inner desire to achieve for the sake of achievement. Highly motivated people remain optimistic even though they have experienced failure or a setback. The fourth component of emotional intelligence is empathy, which implies being considerate and aware of other's feelings. Empathic individuals are effective in retaining talent because they are able to develop a personal rapport with others. The last component of emotional intelligence is social skills. Individuals use their friendliness to have people do what they want. Social individuals are effective persuaders (Goleman, 1995).

Personality traits have a significant influence on human behaviour, especially emotional intelligence. Personality temperament distinguishes one person from another as evidenced by the person behaviours and perception which is relatively stable over time (Phares, 1991). According to Eysenck and Eysenck (1975), personality is an overall pattern of the actual and potential behaviour of organisms, as determined by heredity and environment. Personality traits are measured on different dimensions. Eysenck and Eysenck (1975) proposed three dimensions

of personality, known as extraversion (E), neuroticism (N), and psychoticism (P), better known as PEN. This model has been widely researched in Nigeria (Okhakhume and Ojezele, 1999; Olapegba and Olumuyiwa, 2000).

Traits of psychoticism are aggressive, cold, egocentric, impersonal, impulsivity (impulsive), antisocial (no empathy), hard hearts (tough-minded). On the neuroticism, this is the tendency to experience negative affects such as fear, hostility, and depression (Goldberg, 1990). Those high in Neuroticism tend to overreact to unpleasant events, such as frustrations or problems, and take longer to return to a normal state after being upset. Neurotic individuals are also easily irritated and complain about even the smallest transgressions (Eysenck, 1990; Eysenck and Eysenck, 1985). On extraversion, the typical extrovert is sociable, likes parties, has many friends, needs to have people to talk to, he/she craves excitement, take chances, often sticks his/her neck out, acts on the spur of the moment, and is generally impulsive. While the typical introverted is quiet, retiring sort of person, introspective, found of books rather than people. He is reserved and distant except to intimate friends, he tends to plan, look before he leaps and distrusts the impulse of the moment, and does not like excitement.

In a study conducted in Jordan, Mahasneh (2013) reported a significant positive correlation between personality traits and emotional intelligence. EI and service quality are positively related as they are both vital for increasing performance, in view of this, Andi (2012) found strong relationships between emotional intelligence and personality traits. Chen and Lai (2015) investigated personality traits, emotional intelligence and academic achievements among one hundred and sixty university students in Malaysia. Extraversion was positively correlated with emotional intelligence. Only neuroticism negatively associated with emotional intelligence. Hosseini and Anari (2011) worked on the correlation between emotional intelligence and unstable personality among substance abusers. It was found that there was a negative correlation between emotional intelligence and stable personality. In a study conducted in Nigeria among secondary school teachers, Iruloh and Ukaegbu (2015) reported that personality traits taken together significantly predicted emotional intelligence of secondary school teachers. Agreeableness and extraversion significantly predicted emotional intelligence while the reverse was the case for others (conscientiousness, openness, and neuroticism).

In an effort to include some demographical variables, the study considered gender and age of the participants. In a study conducted by Dunn (2002), it was observed that girls score higher with regard to empathy, social responsibilities and interpersonal relationships than boys. More sensitivity was found towards their relationships with parents, friends and siblings. Similarly, Ciarrochi, Chan and Bajar (2004) found that girls were more adept

at perceiving emotions, regulating emotions, and utilizing emotions for building relationships. Though, Petrides and Furnham (2003) discovered that men perceive themselves to possess higher EI levels than women. Also, in a study conducted among one hundred and sixty participants in Pakistan, Ahmad, Bangash and Ahmadkhan (2009) found that males have high emotional intelligence as compare to females.

Besides, age also has a great influence on EI; this goes in line with the findings of Singh (2002) that younger boys expressed sadness and anger than older boys.

This implies that emotional and social intelligence skills increase as one gets older. In a similar study, Almrans and Punamaki (2008) conducted a study examining gender and age differences in emotional intelligence among three hundred and twelve Bahraini adolescents, it was discovered that gender, not age was significantly correlated with emotional intelligence.

EI is considered to be necessary for health workers as they are required not only to deal with the health problems of patients but also to give feedback on etiology, epidemiology, prognosis, treatment option of patients' ailments and importantly to manage and understand their feelings and that of others which will subsequently increase productivity. However, despite the important function of EI among healthcare professionals, personality traits of an individual play a significant role. The roles of personality traits, age and sex in explaining EI amidst healthcare professionals in Nigeria have not been well documented.

Also, to the best of the researchers' knowledge, most studies done in this area were conducted in developed countries (Andi, 2012; Mahasneh, 2013; Chen and Lai, 2015), and none of these studies were conducted among health care professionals. Few studies that were done in Nigeria among healthcare professionals were conducted in South-West and North-Central respectively (Olowodunoye and Dennis, 2018; Saasongu, 2018). Therefore, it becomes essential that identifying the links between personality dimensions and EI among healthcare professionals in North-Eastern Nigeria has implications for enabling healthcare professionals to cope better in this geopolitical region.

The general objective of this study is to examine the influence of personality traits on EI among healthcare professionals in a tertiary hospital. While the specific objective are: (i) To examine the influence of healthcare professionals age on EI. (ii) To investigate the influence of sex on the EI of healthcare professionals.

Based on the above reasons it is of necessity to test the following hypothesis: (i) Age, sex, religion, marital status, work experience and personality traits will independently and jointly influence emotional intelligence of healthcare professionals; (ii) health care professionals' age will have a significant influence on EI; (iii) gender will have a significant influence on EI of healthcare professionals.

MATERIALS AND METHODS

Procedures

The researchers sought and obtained permission to conduct the research from relevant authorities of the hospital; before that, ethical clearance was received from the ethical committee of the institution. The respondents were given relevant information relating to the nature and purpose of the research. The confidentiality of the information was assured. The staff must be a current employee of the hospital. Furthermore, Yamane (1967) simplified formula for calculating sample size recommended 90 participants. However, the researcher's finally used 91 clinical staff of the hospital in an attempt to increase the external validity of the study, and the participants were selected using accidental sampling technique.

Participants

This cross-sectional survey involved a total number of 91 clinical staff which includes medical doctors, nurses, pharmacists, Occupational therapists, Physiotherapists, clinical psychologists and Social workers were recruited into the study. Most of the participants were males, 60 (66%) and females 31 (34%), younger age was between 18-45 years old 63 (69%) and older age was between age above 45 years old 28 (31%), with a Mean of 1.3 and Standard Deviation of 0.46. For marital status, 72 (79%) were married and 19 (21%) were single. For religion, 62 (68%) were muslim and 29 (32%) were Christians. For year in services, participants from 0-5 years of experience were 40 (44%), 6-10 years of experience 18 (20%), interns 11 (12%), residents 22 (24%).

Setting

The study was carried out in Federal Neuropsychiatric Hospital, Maiduguri, Borno state. The institution serves a population of 25 million in North-East sub-region of Nigeria, as well as across the borders of the Republics of Cameroon, Niger and Tchad.

Instruments

Emotional intelligence

Trait Meta Mood Scale (TMMS) was used to assess emotional intelligence. This scale was developed by Salovey et al. (1995). TMMS is a 48 items instrument on five-point Likert type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Sample of items includes: "I try to think good thoughts no matter how badly I feel", "Sometimes I can't tell what my feelings are", "and the best way for me to handle my feelings is to experience them to the fullest". TMMS has three subscales, the internal consistency of these three scales was established with the following Cronbach's coefficient alpha for each scale (Attention = 0.86, Clarity = 0.87, Repair = 0.82) Salovey et al. (1995). A cronbach's Alpha of .820 was established in this study.

Personality traits

Eysenck Personality Questionnaire was used to assess personality traits. This scale was developed by Eysenck and Eysenck (1975); the scale consists 90 items with a response format of yes or no. The scale was designed to measure three aspects of personality

Table 1. Correlation matrix showing the association among the study variables.

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Mean | SD |
|-----------------|--------|--------|-------|---------|-------|---------|------|--------|---|--------|-------|
| Age | 1 | | | | | | | | | - | - |
| Sex | -0.18 | 1 | | | | | | | | - | - |
| Religion | 0.11 | 0.01 | 1 | | | | | | | - | - |
| Marital status | 0.11 | -0.20 | -0.06 | 1 | | | | | | - | - |
| Work experience | 0.32** | -0.26* | 0.10 | 0.25* | 1 | | | | | - | - |
| Psychoticism | -0.02 | 0.09 | -0.14 | -0.27** | -0.10 | 1 | | | | 4.88 | 3.20 |
| Extraversion | -0.04 | -0.09 | 0.21* | 0.00 | -0.05 | -0.13 | 1 | | | 11.55 | 3.57 |
| Neuroticism | -0.10 | 0.09 | 0.01 | -0.25* | 0.05 | 0.38** | 0.12 | 1 | | 8.77 | 4.60 |
| EE | -0.25* | -0.06 | 0.09 | 0.00 | -0.09 | -0.38** | 0.17 | -0.21* | 1 | 166.19 | 14.09 |

** $p < .01$, * $p < 0.05$, $N=91$, Age was coded 18 – 45 years=1, above 45 years=2; Sex was coded male=1, female=2; Religion was coded Islam=1, Christianity=2; Marital status was coded Single=1, married=2; Work experience was coded intern=1, 0-5 years=2, 6-10 years=3, resident=4.

dimensions; psychoticism, extraversion, neuroticism. Sample of items includes: "Have you ever taken the praise for something you knew someone else had really done", "Have you ever blamed someone for doing something you knew was really your fault" "Are you mostly quiet when you are with other people". A Cronbach's Alpha of .70 was established in this study.

Data analysis

The researchers analysed the participants' socio-demographic variables using descriptive statistics. Pearson correlation was used to test the inter-relationship between the study variables. To test hypotheses one, a hierarchical multiple regression analysis was employed. Hypotheses two and three were examined using t-test for independent sample.

RESULTS

Correlation analysis was first conducted to ascertain possible forms of relationships that exist among the study variables. Pearson Product Moment Correlation was conducted and presented below in the table.

The result in Table 1 indicates that among the socio-demographic characteristics, age had significant relationship with emotional intelligence [$r(89) = -0.25$, $p < 0.05$]. This implied that emotional intelligence increases with younger healthcare professionals, while emotional intelligence decreases with older healthcare professionals. Sex was not significantly related with emotional intelligence [$r(89) = -0.06$, $p > 0.05$]. This implied that male and female do not associate with healthcare professionals' emotional intelligence. Religion had no significant relationship with emotional intelligence [$r(89) = 0.09$, $p > 0.05$]. Marital status had no significant relationship with emotional intelligence [$r(89) = 0.00$, $p > 0.05$]. In a similar trend, work experience was not significantly related with emotional intelligence [$r(89) = -0.09$, $p > 0.05$]. The relationship between personality traits and emotional intelligence revealed that psychoticism

had a negative relationship with emotional intelligence [$r(89) = -0.38$, $p < 0.01$]. This implied that the higher the psychotic personality trait of healthcare professionals, the lower their emotional intelligence tends to be. Extraversion was not significantly related to emotional intelligence [$r(89) = -0.25$, $p > 0.05$] and it means that the extrovert's personality trait of healthcare professionals is not associated with their emotional intelligence. Neuroticism was negatively and significantly related with emotional intelligence [$r(89) = -0.21$, $p < 0.05$]. This implied that the emotional intelligence of healthcare professionals increases with decrease level of neuroticism personality traits.

It was essential to understand that the test for multicollinearity was conducted to avoid the occurrence since the personality traits considered were sub-sections in the same instrument. The Variance Inflation Factor (VIF) and Tolerance test were both utilised for these purposes and the VIF indicated values that range between 1.02 and 1.31, while that of Tolerance ranges between 0.77 and 0.98. The VIF was below 5.00, while the Tolerance exceeds 0.10. This means that the variables had no indication of the lack of orthogonality.

Emotional intelligence was regressed on socio demographic characteristics in step 1 of the analysis. The variables contributed a variance of 9% to the total variance in emotional intelligent. However, the socio demographic variables did not jointly significantly influence emotional intelligence [$F(5, 85) = 1.71$, $p > 0.05$]. Independently, the result indicated that age significantly predicted emotional intelligence ($\beta = -0.27$, $t = -2.46$, $p < .05$). Gender ($\beta = -0.12$, $t = -1.12$, $p > 0.05$), religion ($\beta = 0.13$, $t = 1.19$, $p > 0.05$), marital status ($\beta = 0.03$, $t = 0.24$, $p > 0.05$), and work experience ($\beta = -0.05$, $t = -0.47$, $p > 0.05$) were not significant predictors of emotional intelligence.

In step 2 of the regression, personality traits were added and it was noted that psychoticism predicted

Table 2. Two-step hierarchical multiple regression showing predictions on emotional intelligence.

| Models | B | T | R | R ² | ΔR ² | Df | F | ΔF |
|-----------------|-------|---------|------|----------------|-----------------|------|--------|--------|
| Step 1 | | | 0.30 | 0.09 | - | 5.85 | 1.71 | - |
| Age | -0.27 | -2.46* | | | | | | |
| Sex | -0.12 | -1.12 | | | | | | |
| Religious | 0.13 | 1.19 | | | | | | |
| Marital status | 0.03 | 0.24 | | | | | | |
| Work Experience | -0.05 | -0.47 | | | | | | |
| Step 2 | | | 0.51 | 0.25 | 0.16 | 8.82 | 3.50** | 5.99** |
| Age | -0.27 | -2.62* | | | | | | |
| Sex | -0.09 | -0.84 | | | | | | |
| Religious | 0.05 | 0.46 | | | | | | |
| Marital status | -0.11 | -1.00 | | | | | | |
| Work Experience | -0.03 | -0.23 | | | | | | |
| Psychoticism | -0.33 | -3.01** | | | | | | |
| Extraversion | 0.12 | 1.15 | | | | | | |
| Neuroticism | -0.15 | -1.36 | | | | | | |

** p < .01, * p < 0.05, N=91, Age was coded 18 – 45 years=1, above 45 years=2; Sex was coded male=1, female=2; Religion was coded Islam=1, Christianity=2; Marital status was coded Single=1, married=2; Work experience was coded intern=1, 0-5 years=2, 6-10 years=3, resident=4.

Table 3. T-independent test showing age difference on emotional intelligence.

| Parameter | Age | N | Mean | SD | Df | t | p |
|------------------------|---------|----|--------|--------|----|------|--------|
| Emotional Intelligence | Younger | 63 | 168.52 | 13.787 | 89 | 2.44 | < 0.05 |
| | Older | 28 | 160.93 | 13.559 | | | |

Table 4. T-independent test showing sex difference on emotional intelligence.

| Parameter | Gender | N | Mean | SD | df | t | p |
|------------------------|--------|----|--------|--------|----|------|--------|
| Emotional Intelligence | Male | 60 | 166.83 | 13.195 | 89 | 0.61 | > 0.05 |
| | Female | 31 | 164.94 | 15.834 | | | |

emotional intelligence in such a way that emotional intelligence increases with a decrease in psychoticism personality trait ($\beta = -.33$, $t = -3.01$, $p < 0.05$). Extraversion did not significantly predict emotional intelligence ($\beta = 0.12$, $t = 1.15$, $p > 0.05$). This means that extraversion personality traits had no influence on healthcare professionals' emotional intelligence. Neuroticism did not significantly predict emotional intelligence ($\beta = -0.15$, $t = -1.36$, $p > 0.05$) (Table 2).

Jointly, the variables contributed a significant variance of 25% to the total variance observed in emotional intelligence [$R = 0.51$, $R^2 = 0.25$, $F(8, 82) = 3.50$, $p < 0.01$]. More specifically, personality traits were the major reason for the observed significant influence with its contribution of a significant 16% to the model ($\Delta R^2 = 0.16$, $\Delta F = 5.99$, p

< 0.01). The results confirmed hypothesis one.

Table 3 indicates that age had significant influence on emotional intelligence of healthcare professionals [$t(89) = 2.44$, $p < 0.05$]. This means that the age grouping significantly differs in emotional intelligence such that younger healthcare professionals ($M = 168.52$; $SD = 13.79$) had higher emotional intelligence compared to older healthcare professionals ($M = 160.93$; $SD = 13.56$). This confirmed hypothesis 2 and it was accepted.

It was noted in Table 4 that gender had no significant difference on emotional intelligence [$t(89) = 0.61$, $p > 0.05$]. This implied that male healthcare professionals ($M = 166.83$; $SD = 13.20$) do not differ from their female counterparts ($M = 164.94$; $SD = 15.83$) when compared on emotional intelligence. This negates hypothesis 3 and it

was rejected.

DISCUSSION

The first hypothesis which states that age, sex, religion, marital status, work experience and personality traits will independently and jointly influence emotional intelligence of healthcare professionals was confirmed. This study was supported by Iruloh and Ukaegbu (2015) findings that personality traits predicted emotional intelligence. Also, Mahasneh (2013) was of the same view that there is a positive correlation between personality traits and emotional intelligence. However, only age and psychoticism significantly predict emotional intelligence among healthcare professionals. This suggests that younger healthcare professionals and those who scored low on psychoticism were more emotionally intelligent. This finding confirmed the study conducted by Singh (2002) that age influence EI but the direction was not specified. Other dimensions of personality traits such as extraversion, neuroticism did not predict EI. This was contrary to the findings of Hosseini and Anari (2011) that neuroticism and extraversion influence EI, and also disagree with Chen and Lai (2015) that extraversion positively correlated with EI. However, Chen and Lai (2015) reported that neuroticism negatively connected with emotional intelligence, this was in line with the findings of this study that neuroticism trait did not predict emotional intelligence.

The second hypothesis which states that healthcare professionals' age will have a significant influence on EI was accepted. This finding was in line with the finding of Singh (2002) who found age to have a great influence on emotional intelligence. Though, in Singh's study, younger boys expressed sadness and anger more than older boys which implies that emotional and social intelligence skills increase as one gets older. But in this current study, being young has more influence EI than older age. The reason behind this finding might be that higher EI found among younger healthcare professionals is a result of a decline in work commitment mostly found among the old staff of most organisations as a result of perceived organisational injustice.

The third hypothesis which states that gender will have a significant influence on EI of healthcare professionals was rejected. This study was contrary to the finding of Dunn (2002) who observed that girls score higher with regard to empathy, social responsibilities and interpersonal relationships than boys. Similarly, contrary finding was reported by Ciarrochi et al. (2004) that girls were more adept at perceiving emotions, regulating emotions, and utilizing emotions for building relationships. Like other previous studies, Ahmad et al. (2009) found that males have high emotional intelligence compare to females.

It was deduced from this study that being higher on EI

is not a function of one's gender. EI manifest in different ways in both genders. Diverse of EI was found in thousands of men and women; women are more aware of their emotions, show more empathy, more proficient interpersonally, while men are self-confident, positive, and flexible. In general, gender roles and EI are interwoven, some men are empathetic as the most interpersonally level-headed women are, while some women are just as able to withstand stress as the most psychologically resilient men.

In conclusion, personality traits predict emotional intelligence, and to be specific being low on psychoticism trait and younger age also predicts EI of healthcare professionals. This implies that younger healthcare professionals are higher in emotional intelligence than older ones especially in a professional setting like hospitals where patients and their relatives need to be communicated concerning their ailments proficiently. Also, healthcare professional's gender does not influence emotional intelligence. Both males and females tend to respond in the same manner to situations depend on personal characteristics, situational/contextual factors and personal experience.

The study of this nature cannot complete without its limitations. Firstly, the generalisation of this study is limited due to the total number of the participants which was considered to be relatively small and only one setting was considered from the numerous health care facilities in the Maiduguri. Secondly, in recent time, dimensions of personality has been improved upon by different scholars, this study considered Eysenck Personality Questionnaire (EPQ) which is three dimensions. These three dimensions of personality are not compressive, and cannot be used to explain personality traits fully as other dimensions such as (five dimensions) has been researched on and established.

It is therefore recommended that EI screening should be an essential prerequisite for recruiting healthcare professionals. This is because empathic communication which is an important ingredient of EI is one of the skills needed to be effective and successful in dealing with the patients in terms of psycho-education/sensitization on epidemiology and etiology of illness and breaking bad news.

Healthcare professionals that are young, soft-minded, empathetic, less aggressive and impulsive should be allowed to handle those professionals issues that are highly emotional or sensitive in the workplace.

The management of health care institutions should ensure continuous training on how to understand the key components of EI such as emotional repair, attention, and clarity. This would enable the professionals to reduce incidences of transferred aggression on patients and colleagues at work because they will be able to understand and manage their emotions better.

Lastly, three dimensions of personality traits measures used in this study should be improved on by other researchers. Measure like big five inventory that has

five dimensions of personality traits should be considered in a subsequent study.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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