Journal of Positive School Psychology http://journalppw.com
2022, Vol. 6, No. 10, 1833-1851

Relationship Between Personality Trait, And Mental Health Well-Being, The Mediating Role Of Emotional Intelligence Among Healthcare Workers In Jizan, KSA

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Abstract

Objective: The study intended to explain the relationship between personality traits (PT), emotional intelligence (EI), and mental health well-being (MHWB) among the comparative healthcare workers population of the region of Jizan, Saudi Arabia. Moreover, also aimed to explain the mediating role of emotional intelligence in the relationship between personality traits (PT), and mental health wellbeing (MHWB) among the comparative healthcare workers population of the region of Jizan, Saudi Arabia

Study design: The current study operationalized a cross-sectional design.

Place and Duration of study: Present research was conducted at the Healthcare Organizations and Hospitals Region of Jizan in the Kingdom of Saudi Arabia. Data collected was done from November 10, 2021, to Feb 20, 2022.

Methodology: The purposive non-probability sampling technique was operationalized to study research variables in English language versions of the Big Five Inventory, The Schutte Self Report Emotional

Intelligence Test, and the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). Data analysis was done through the SPSS version 26.

Results: Correlational research indicates that all the variables i.e., PT, EI, and MHWB Positively related to each other. Mediation analysis for finding stated that mediated role of emotional intelligence in the relation between personality traits and mental health wellbeing.

Conclusion: The mental health well-being of the healthcare workers during uncertain clinical situations could be managed through the utilization of an appropriate mechanism of emotional intelligence in compliance with the appropriate personality trait. Role of emotional intelligence was to start the relationship between personality traits and mental health well-being to formulate and design protective interventions that effectively manage the scenario of distress. EI paired with the PT elevated the mental health well-being of the healthcare workers.

Keywords: Personality traits, Emotional intelligence, mental health well-being, healthcare workers, Mediation.

Introduction

Health is characterized not only by wellness but stability and homogeneity of the state of individualized physical and mental perspectives (Evans et al., 2021). Nowadays mental health is the most profoundly threatened by situational, environmental, and personal factors (Clark et al., 2020). According to world statistics, 14.3% of worldwide deaths are reported (Pinna & Edwards, 2020) because mental health accounts for 8 million deaths (Trost et al., 2021) out of which approximately 75% are because of suicide (Williams et al., 2021). Mental health is, therefore, a necessary and important variable of study nowadays (Harding et al., 2019). The research represents the two types of well-being hedonic and eudemonic well-being (Papadatou-Pastou et al., 2019), der Kinderen et al. (2020), supported eudemonic happiness as the essential form of mental health wellbeing. That suggested individualized care for self-based actualization.

Mental health relates to the capricious attributes that explain self-acceptance, the purpose of life, life achievement satisfaction, and environmental mastery (Fusar-Poli et al., 2020). Studies reported that all these attributes constitute the establishment of individual characteristics i.e., Optimism, courage, initiative, and hope for the future (Kamerāde et al., 2019). Similarly, the self-determination theory ponders upon the insight of psychological needs and inherited growth (Geirdal et al., 2021). Theory highlighted the key concept that a person's psychological well-being is based on autonomy, competence, and relatedness (McMillan et al., 2019). Hence, the authentic happiness model stated the devotion and pursuit of fruition deeds and charity works that is congruent with the enduring characteristics (Foster et al., 2020). A similar perspective was addressed by the research suggesting mental health well-being is associated with personalities (Viner et al., 2019).

Personalities are the vibrant union of characteristics of the individual (Goodman et al., 2019). Personality develops during the adolescent period therefore, personality put a remarkable impression on the individual life, especially in the care of mental health (Mariotti et al., 2021). Myer and Briggs (2020) reported that certain personality archetypes flourish through personal characteristics. These characteristics portray their union in the form of

personality preferences and form types. Later, these preferences and types were reunited to form five types of traits personality instead of categorizing the individual into types (Furnham, 2020).

These personality traits give a proximal picture of the individual (Bharadwaj et al., 2018). Similar perspectives addressed by the researchers form trait the connection of personality to emotional intelligence (Dhiman & Raheja, 2018: Khan et al., 2020). Emotional intelligence is defined as discriminating, cultivating, labeling, and monitoring one's own and other emotions (Kotsou et al., 2018). Emotional intelligence is also defined as effective coping strategies to deal with various situations either in one's own life or others (MacCann et al., 2020). It is also stated that emotional intelligence is also associated with personality traits that evolved in the personal standard of life. Moroń and Biolik-Moroń. (2021), indicated deformities, deficits, defense, and abnormal causes by the external surrounding environment to EI Cherry (2018) reported that emotional intelligence is formulated on self-awareness, self-regulation, social skills, empathy, and motivation.

These follow the functional as well as structural duties of the healthcare profession (Pérez-Fuentes et al., 2018: Noshili et al., 2022). Different studies demonstrate similar results by identifying the emotionally intelligent workers in the clinical department (Soto-Rubio et al., 2020). Moreover, it gives ample evidence about the emotionally stable individual how to solve several lethargic and difficult situations with a broader vision, outlook, and self-actualization (MacCann et al., 2020).

The study aims to address the moderating role of emotional intelligence in personality traits and mental health wellbeing. This gives information about the personality traits in relation to mental health well-being in the comparison regarding the study sample of region of Jizan, Saudi Arab population. Studies are lagging in the healthcare workers field regarding the comparison group analysis of personality traits, mental health well-being, and emotional intelligence. Literature provides the reason that unimportance, worthless and uninteresting content of study. Reality is conflicting, they are the bottleneck for our medical field and society.

Methodology

Research design:

Quantitative cross-sectional research design with the operationalization of purposive non-probability sampling technique.

Participants:

Cross-cultural participants of 400 samples (female = 328, male = 72) with the mean age range of 21 – 25 years from the general healthcare workers of region of Jizan, Saudi Arab public teaching hospitals.

Procedure:

During the data collection procedure, permission was obtained from their public healthcare workers Teaching Hospital. Informed consent was given to the participant prior to the cost in a distribution that contained the information regarding the purpose of the study and the Institution of concern used regarding their individual responses and confidentiality of the responses as well as the name of the institute will not be revealed (Sahar et al., 2022). Moreover, the consent form demonstrated the participant's volunteer participation in this research. For this purpose, the self-report written in English language, questionnaire took 10 to 15 minutes to compile.

Measures:

Prior to the execution of the main research data collection, reliability and validity were established using the pilot study

Demographic Questionnaire:

Participants' background information was obtained through the demographical in the questionnaire which includes age, gender, educational level, semester, grades, and nationality.

Warwick-Edinburgh Mental Well-being Scale (WEMWBS) is used to measure mental health wellbeing and is composed of 14 items. Which measures life satisfaction, the ability to maintain and develop mutually benefitting relationships, and psychological functioning using the 5-point Likert scale ranging from 1 = None of the time to all to 5 = all the time. Remarkable internal consistency of Cronbach alpha reliability of .89 (Marmara et al., 2022) and .87 (Koushede et al., 2019).

Big five inventory BFI is used to measure the five big personality traits. BFI is composed of 44 items and 5 subscales including Openness (10 items), extroverts (8 items), agreeableness (9 items), neuroticism (8 items), and consciousness (9 items) using a 5-point Liker-type scale, ranging from 1 = disagree strongly to 5 = Agree strongly. There are certain reverse scoring items including 2,6,8,9,12,18,21,23,24,27,31,34,35,37,41 and 43. Good internal consistency of Cronbach alpha reliability of .89 (Halama et al., 2020) and .87 (Steyn, & Ndofirepi, 2022).

The Schutte Self Report Emotional Intelligence Test is used for general intelligence based on Mayer and Salovey's ability model. It is composed of 33 items with four subscales i.e., one perception of emotion (10 items), managing own emotions (9 items), managing others' emotions (8 items), and utilization of emotions (6 items). Rated on 5 points Likert scale, ranging from 1 = disagree strongly to 5 = Agree strongly with the reverse scoring of item numbers 5,28, and 33. Internal consistency of Cronbach's alpha reliability .90 (Aniemeka et al., 2020) and .89 (Weerasinghe et al., 2022).

Statistical Analysis:

Statistical analyst analysis testing regarding the proposed model adequacy. the present study operationalizes the path analysis by using AMOS 23 (Wazana 2020). The present study model was tested through the standardized coefficient obtained to the maximum likelihood estimates (Correia et al., 2019). the goodness of fit regarding every path was estimated to decide the chi-square to the multiple indices i.e., root mean square Residue (RMSEA) (Pavlov et al., 2021), standardized root means square test (SRMR) (Shi et al., 2018), and comparative fit index (CFI) (Shi et al., 2019). A good fit is indicated by the CFI value greater than.90. Moreover, the value is .05 for RMSEA and SRMR indicating a good fit.

Results

Before executing the analysis regarding the hypothesized model. The total sample size was 400 after the screening process of missing data. The total amount of missing data in the present study was .8 % regarding all values in the present questionnaires. Therefore, to eliminate this problem Participant number 27 was removed from the data set because they missed more than 45% of the responses. For further missing data adjustment, we operationalized the item mean substitution (IMS). According to the previous literature if the missing data is less than 10% the IMS provides an effective, authentic, and reliable imputation solution accessed to other methods. Univariate outliers were detected

in the range of +1 to -1 through the skewness and kurtosis, whereas no signs of multi outliers.

Table 1 the demographic values regarding the participants of the research (N = 400)

Demographics	f (%)	Demographics	f (%)
Gender		**Semester**	
Male	72(18)	1 – 4	340(85)
Female	328(82)	5 – 8	60(15)
Age		**Grade**	
15 – 20	64(16)	A	299(75)
21 – 25	228(57)	B	101(25)
26 – 30	108(27)	**Population**	
Education level		Nurses	128(32)
postgraduate level	209(52.3)	Doctors	80(20)
Graduated level	191(47.7)	Informatics	104(26)
		Others (other supporting staff)	88(22)

Table 1 indicates the total sample size is 400 out of which the female percentage is higher with the age limit of 21 - 25, education level of graduate healthcare workers, belonging from four distinct populations of nurses, doctors, informatics, and others (other supporting staff) representation belonging from the of the region of Jizan, KSA population.

Table 2 Correlation between the PT, EI, and MHWB.

Scales	1	2	3	4	5	6	7	8	9	10	11	12
MHWB	-	**.288****	.346**	.345**	.110	-.081	.165*	**.489****	.377**	.264**	537**	.514**
PT	-	-	.762**	.847**	.736**	-.707**	.715**	**.548****	.483**	.329**	.505**	.541**
ES	-	-	-	.635**	.463**	-.361**	.351**	.410**	.313**	.237**	.426**	.434**
OS	-	-	-	-	.491**	-.482**	.442**	.523**	.414**	.320**	.484**	.571**
AS	-	-	-	-	-	-.407**	.591**	.313**	.323**	.175*	.291**	.264**
NS	-	-	-	-	-	-	.537**	.381**	.364**	.202*	.357**	.381**
CS	-	-	-	-	-	-	-	.365**	.350**	.229**	.299**	.308**
EI	-	-	-	-	-	-	-	-	.810**	.818**	.816**	.788**
POE	-	-	-	-	-	-	-	-	-	.474**	.538**	.675**
MOE	-	-	-	-	-	-	-	-	-	-	.539**	.413**
MOTE	-	-	-	-	-	-	-	-	-	-	-	.664**
UOE	-	-	-	-	-	-	-	-	-	-	-	-

MMHWB = mental health wellbeing, PT = personality inventory, ES = extroversion subscale, OS = openness subscale, AS = agreeableness subscale, NS = neuroticism subscale, CS -= Conscientiousness subscale, EI = emotional intelligence scale, POE = perception of emotion, MOE = managing own emotion, MOTE = managing others emotion, UOE = utilization of emotion. *** = 0.1, ** = .05, * = 0.1

Table 2 indicates the significant positive relationship between personality traits, psychological well-being, and emotional intelligence. Similarly, subscales of PT and EI are also significantly related to mental health wellbeing.

Figure 1 Comparison graph of educational level healthcare workers population

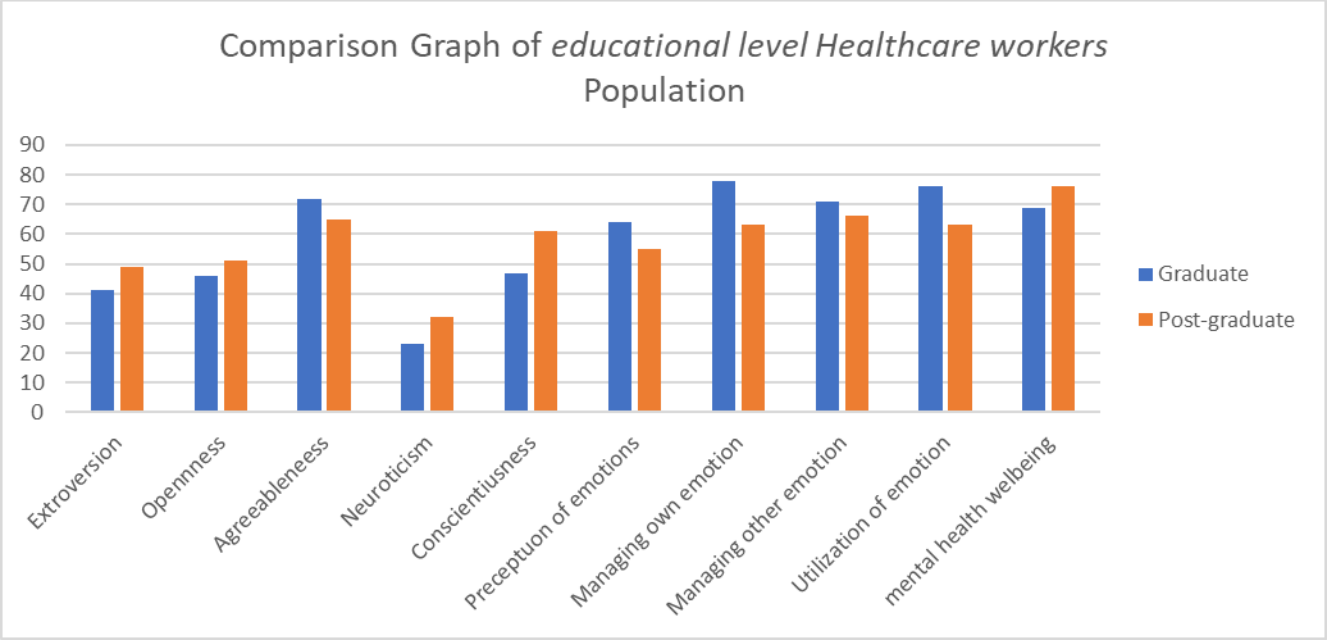


Figure 1 indicates the comparison of personality traits (Extroversion, openness, agreeableness, neuroticism, and conscientiousness), emotional intelligence (managing own emotion, managing other emotions, and utilization of emotion), and mental health well-being based on the educational level region of Jizan, Saudi Arabic healthcare workers population.

Comparison of the educational level in the region of Jizan, Saudi Arab healthcare workers populations on PT, EI, and MHWB.

Table 3 Comparison of the educational level in the region of Jizan, Saudi Arab healthcare workers populations on PT, EI, and MHWB.

	Graduate N = 209		Post-graduate N = 191				95% class		Cohen's d
Scales	M	S. D	M	S. D	t (156)	P	LL	UL	
MHWB	51.42	12.17	53.3	9.04	.488	.042	-4.8	-2	0.089
PT	148	29.5	158.3	18.5	.2.45	.003	-18.6	-1.5	0.419
EI	122.29	31.06	128.25	14.85	1.56	.000	-13.5	2.89	0.245

**p= .05, *p=0.1

Table 3 indicates the significant difference between the two populations of educational levels in the region of Jizan, Saudi Arabian healthcare workers on the personality trait, emotional intelligence, and mental health well-being.

Figure 2 Comparison graph of healthcare workers population

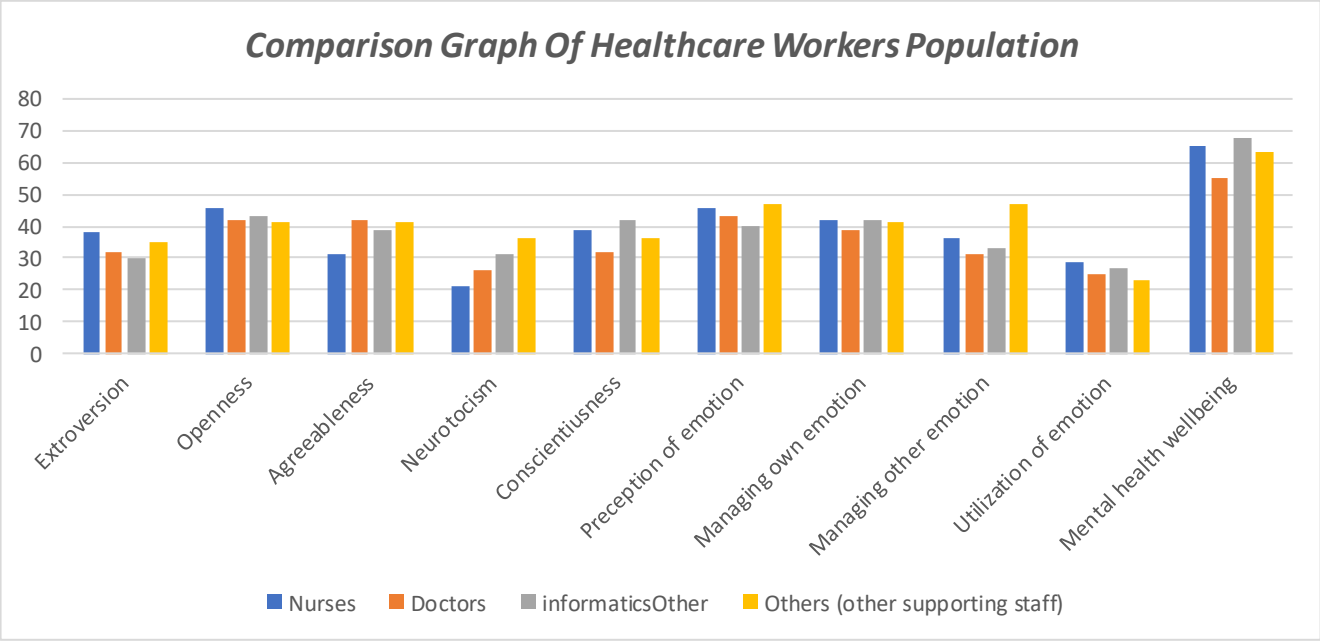


Figure 2 indicates the comparison of personality traits (Extroversion, openness, agreeableness, neuroticism, and conscientiousness), emotional intelligence (managing own emotion, managing other emotions, and utilization of emotion), and mental health well-being based on the region of Jizan, Saudi Arabic healthcare workers population.

Comparison of the healthcare workers populations in the region of Jizan, Saudi Arab on PT, EI, and MHWB.

Table 4 Comparison of the healthcare workers population in the region of Jizan, Saudi Arab on PT, EI, and MHWB.

Scales	Nurses (128)		Doctors (80)		Informatics (104)		Others (88)		F (1, 142)	Ƞ
	M	S. D	M	S. D	M	S. D	M	S. D		
MHWB	49.87	10.88	54.87	7.53	53.91	10.25	50.79	8.05	2.72	.003
PT	147.96	27.98	161.6	17.46	162.65	11.61	156.37	15.43	5.06	.060
EI	121.73	26.22	129.15	13.00	132.2	13.29	127.79	13.47	2.51	.046

**p= .05, *p=0.1

Table 4 indicates the significant difference among the healthcare workers populations in the region of Jizan, Saudi Arabian in the personality trait, emotional intelligence, and mental health well-being.

Table 5 Goodness-of-Fit Indices

$\chi 2$	df	TLI	CFI	RMSEA	SRMR
Measurement Model 1					

712.88	425	.93	.91	.05	.10
Measurement Model 2					
468.71	290	.92	.92	.04	.9

Table 5 indicates measurement model 1, model fit showing that there was a significant chi-square test (χ 2 = 712.88, DF = 425), as well as CFI (.91) and TLI (.91) within the acceptable cutoff. RMSEA value in the adapted model was .05. The value of SRMR was slightly larger than the .08 cutoff.

As indicated by measurement model 2, model fit shows chi-square test significance (χ 2 = 468.71, DF = 290), as well as CFI (.92) and TLI (.92) within the acceptable cutoff. The RMSEA value in the adapted measurement model was .04. The SRMR value was slightly larger than the preferred .08 cutoff.

Table 6 Bootstrapped Regression Weights for Measurement Model 1

	B	CP	p
POE <--- ES	.51	1.91	***
POE <--- OS	.73	2.33	***
POE <--- AS	.64	3.22	***
POE <--- NS	-.78	2.67	***
POE <--- CS	.61	2.83	***
MOE <--- ES	.51	1.81	***
MOE <--- OS	.51	1.97	***
MOE<--- AS	.74	2.34	***
MOE <--- NS	-.64	3.28	***
MOE<--- CS	.78	2.62	***
MOTE <--- ES	.71	2.33	***
MOTE <--- OS	.59	1.92	***
MOTE<--- AS	.73	2.33	***
MOTE<--- NS	-.64	3.29	***
MOTE<--- CS	.78	2.67	***
UOE <--- ES	.51	1.94	***
UOE<--- OS	.73	2.33	***
UOE<--- AS	.64	3.23	***
UOE<--- NS	-.78	2.67	***
UOE<--- CS	.55	1.99	***
MHWB <--- POE	.52	1.94	***
MHWB <--- MOE	.73	2.33	***
MHWB <--- MOTE	.62	3.21	***
MHWB <--- UOE	.79	2.63	***

Note. *** = p

Table 6 depict the standard coefficient of model 1, indicating positive impact of the personality traits (extraversion, agreeableness, conscientiousness, and openness) whereas, as the neuroticism has negative impact on the emotional intelligence subscales (perception of emotion, managing own emotion, managing others emotion, and utilization of emotion).

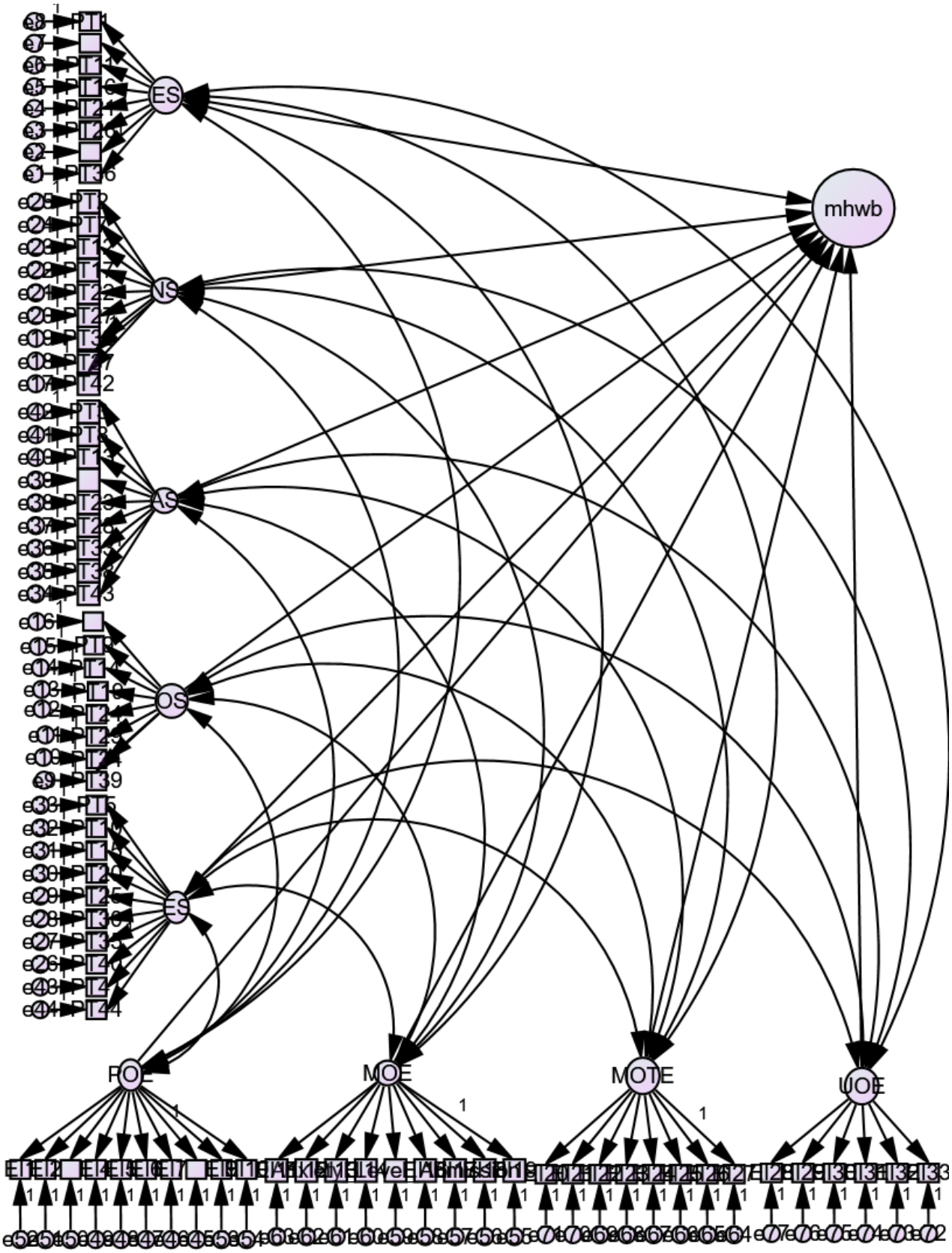

ES
NS
AS
OS
ES
mhwb
ROE
MOE
MOTE
UOE

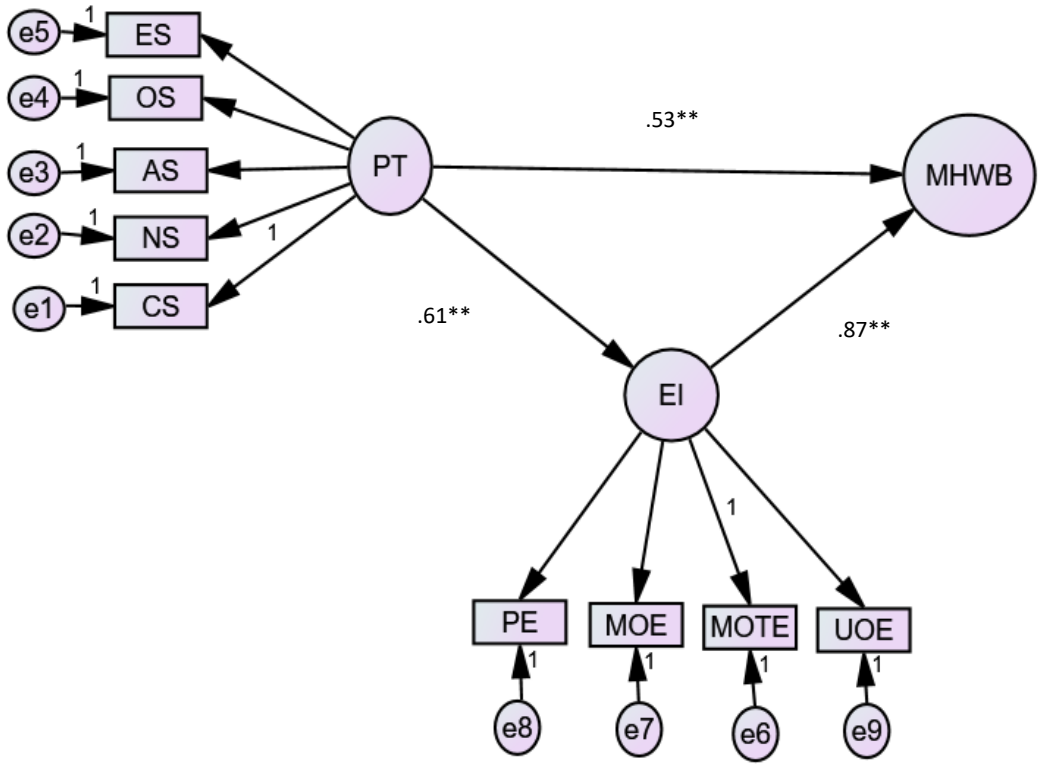
Figure 2 indicates the measurement model 1, sowing the impact of personality traits ((extraversion, agreeableness, conscientiousness, openness, and neuroticism) on the emotional intelligence ((perception of emotion, managing own emotion, managing others emotion, and utilization of emotion) subscales and mental health wellbeing.

Table 7 Bootstrapped Regression Weights for Measurement Model 2

	B	C.R.	P
EI <--- PT	.61	1.99	***
MHEB <--- EI	.53	3.07	***
MHWB <--- PT	.87	2.40	***

Note. *** = p

Table 7 indicates that personality traits have strong positive impact on the emotional intelligence and emotional intelligence has positive impact on the menta health wellbeing. Whereas the personality traits have weak positive impact on the menta health wellbeing.



population of the region of Jizan, Saudi Arabia. The correlational analysis indicates that personality traits (extraversion, openness, agreeableness, neuroticism, and conscientiousness) show a strong correlation of values with them emotional intelligence (protection of emotion, managing only motion, managing other emotion, and utilization of emotion) and mental health wellbeing. Correlational mattress indicates that the four types of personality traits i.e., Extraversion, openness, agreeableness, and conscientiousness

show a positive correlation value with their scale of emotional intelligence and mental health wellbeing, whereas neuroticism indicates a negative correlation coefficient. Previous literature indicates that the findings of the present study follow the previous literature showing appropriate synonyms in this finding. Personality is the enduring practice of an individual character. Emotional intelligence broader the individual capacity to cope with the environmental hazards, situational parameters, and postman consequences (Papadatou-Pastou et al., 2019). Personality traits also demonstrated the positive as well as negative aspects of individuals suggesting certain characteristics and features associated with them. It is stated that personality traits that were associated with negative characteristics lead the individual toward social, psychological as well as mental deformities started the regeneration of certain neurological cells, autophagy, and depression (Soto-Rubio, et al., 2020: Shahbal et al., 2022). Empirical studies indicate that personality traits that are associated with emotional intelligence are significant in clinical practice, specializing in the case of healthcare workers (Athar et al., 2020). The profession of healthcare workers is associated with empathy, stability, and healthcare effective working. Therefore, it is the strength of variation in the healthcare workers who have higher emotional intelligence and associated productive positive personality traits usually portray more effective mental health in their clinical practices (Goodman et al., 2019).

The present study regarding the mediated responsibility of emotional intelligence on the relationship between personality traits and mental health well-being was remarkable. It showed substantial direct as well as indirect effects, relationship effects that focus on the prospectus of direct effect and indirect effect suggesting that: in the direct effect personality trait directly affected mental health wellbeing (Harding et al., 2019). The statement follows the previous literature showing that negative traits of personality are the flattening factors to the mental health well-being and negative outlook towards the person, environment, and consequences. Similarly, the indirect effect is associated with personality type (Batool et al., 2022) and emotional intelligence (Soto-Rubio et al., 2020). This relationship awaits the social perception, environmental factors, and other consequences to elevate mental health in society (Liu et al., 2021; Shubayra et al., 2022). The indirect effect is also in compliance with furious literature in positive psychology, Hampshire et al. (2021), suggesting that the positive traits of personality are influenced by the emotional intelligence that helps to elevate their mental health. Similarly, administered in the various research that the personality is enclosing physiognomies of mental health of an individual. This portrays their negative as well as positive aspects of life, especially the psychological deficits, deformities, and abnormalities (Pinna & Edwards, 2020).

Furthermore, the present study also demonstrates the comparison of two distinct populations based on educational level of the region of Jizan, KSA, showing the significant difference between these populations. Moreover, present findings also demonstrate the significant results of one-way ANOVA across healthcare workers population. Findings follow the already present literature showing that several factors contribute to the difference in this comparison. These attributes include socio-economic status, norms, values, cultural background, religious orientation, personal demographic information, etc. These structures are congruent with the individual character that also gives information about their knowledge, competencies, and skills acquisitions to the knowledge from any literacy source (Suprapto et al., 2020, Shahbal et al., 2022; Alharbi et al., 2022). The present study

has several implications in the clinical setting, especially in the case of comparative analysis. Finally, the study suggested that healthcare workers practices are different especially in the characteristics of brain drawing and brain gain consequences that need to be addressed by future research.

Conclusion:

Personality traits perform key to mental health well-being with the mediating role of emotional intelligence between them. According to the findings it can be inferred that emotional intelligence mediates the relationship between personality trade and mental health wellbeing among healthcare workers in a comparative study of the region of Jizan, Saudi Arabic populations. Interventions need to be acknowledged and reinvented in society regarding personality development, especially in the case of trait upbringing and establishment. For this reason, there is a need to identify certain key elements of emotional intelligence. Therefore, it can be concluded that coping with any dangerous, lethargic, and hardship movement of clinical practices will be neutralized by personality trait that enables the healthcare workers to use the appropriate perspective of emotional intelligence and develop certain positive coping strategies that help to maintain the mental health healthcare workers practitioner. Therefore, all these interventions can also lead to stress management in the clinical healthcare setting and help to flourish appropriate mental health well-being among the healthcare workers.

Limitation

None of the research is away from limitations this is because every research has finite solutions regarding issues. In this present study, there are a few limitations that demonstrate certain limited criteria which include the research language that affects the participation of the sample. All the questionnaires were written in the English language, therefore, biases in comprehension and generalizability evolve. Future research regarding cross-cultural studies should translate the questionnaire to their native language to get a diverse sample in the targeted culture and country. Moreover, the research was correlational mediated therefore several confounding variables were not properly administered such as circumstances, peer pressure, etc.

Implementation

The present study has wider implications for the clinical settings in response to the healthcare workers' practices and gives information about the personality trait and mental health quality of these clinical healthcare workers. Moreover, research also assists the field of psychology, especially in the case of healthcare workers' practices where they can develop a positive outlook on life and reduction of psychiatry illnesses among healthcare workers. Understanding the trait characteristics of personality that affect the psychological health of an individual. That will enable healthcare practitioners to develop certain interventions and innovations to minimize hazardous conditions regarding mental health.

Ethics approval and consent to participate:

After providing study plan, proposal, and ethical consideration from, the Ethical Approval was obtained from IRB of Health Directorate, Ministry of Health, Jizan, Saudi Arabia. While before collection of data, a written inform consent form was presented to the participants and each of the participants signed the inform consent form.

Funding:

There is no funding source was there.

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Acknowledgements:

We acknowledge the support of the Directorate of Health, Ministry of Health Jizan.

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