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PERSONALITY TRAITS OF PHARMACISTS: A BETTER UNDERSTANDING OF FACTORS INFLUENCING PHARMACY PRACTICE CHANGE IN PAKISTAN

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ABSTRACT

Personality has become a focus point in organizational research over the past couple of decades, management skills development and derailment, and mainly employee selection. A better understanding of the personality traits of members of the profession is also required; to deliver a complete pictures of the way in which pharmacists should attempt to revolutionize pharmacy practice. A descriptive cross-sectional study design was to assess personality traits among pharmacists working in different fields in Pakistan. Sample size was calculated to be 382 pharmacists to achieve 95% confidence level with 5% margin of error. A pre-validated data collection tool Big Five Inventory questionnaire was self-administered to the respondents. After data collection, data was cleaned, coded and analyzed using SPSS version 21. Results showed that out of 382 respondents, females were found more extrovert than males with a mean score (25.1, ± 3.89). Agreeableness was found low in all studied fields of pharmacy. Neuroticism was high in industrial pharmacists with mean score (26.5, ± 4.3) and hospital pharmacists with mean score (27, ± 4.1). Consciousness was found high in pharmacists working in private sector with mean score (29.1 ± 4.6). Openness was low in pharmacist working in both private and government sectors. The present study concluded that although, neuroticism a negative trait was found high among pharmacists in twin cities but it was encouraging to notice that pharmacists also possessed positive traits including extraversion, consciousness and openness in their personality. Moreover, industrial pharmacists, hospital pharmacists and especially pharmacists working in government sectors possessed highest neuroticism.

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INTRODUCTION

Personality traits include recurrent ways of behaving, thinking, and feeling, which display heritability and constancy across time. A rising harmony accepts the Five Factor Model (FFM) as a rational conceptualization of human personality [1]. The five characteristics of five-factor model include Extraversion, Neuroticism, Openness, Agreeableness and Conscientiousness [2]. Personality traits differ geographically. Pharmacist chooses different career domains which may have diverse demands and environments, regardless of knowledge and scholarly capability [3]. A contributing factor could be personality whereby, pharmacist seeks to work in an environment which is compatible with their personality [4]. A study conducted in Canada characterized the personality traits of hospital pharmacists in one province, to provide insights into possible barriers to practice change. Findings of extraversion were inclined toward respondents that exposed the stronger expression, sociability, conscientiousness, and sincerity and small levels of neuroticism with the later representing stability [5]. Another study from South Africa established the relationship between burnout, personality traits and coping strategies. The results found that active coping strategies were related with Emotional Stability, Extraversion, Openness to Experience and Conscientiousness, while passive coping strategies were related with Neuroticism, low Agreeableness and low Conscientiousness. Emotional Stability, Extraversion, Openness to Experience, Agreeableness and Conscientiousness were related with lower emotional exhaustion and depersonalization and higher personal accomplishment. Constructive coping strategies were associated with personal accomplishment [6].

To have a proper care, which presents important shift from past models of practice, pharmacists must incorporate the roles of a caregiver, correspondent, manager, teacher, life-long learner, and decision maker [7]. Therefore, behavioral qualities that are favorable to these characteristics are required. Though, pharmacists in past practices were more product-focused than patient-centered services [8]. One of the main features affecting receptiveness to modification is personality type, since entities tend to select careers that complement their personality [9]. Consequently, the large change in pharmacy practice could bring the outcome in resistance to change, gross displeasure, and unsuccessful coping behavior due to mismatched character traits (Cordina et al., 2015). Personality has become a focus point in organizational research over the past couple of decades, management skills development and derailment, and mainly employee selection [10]. This buoyancy is mainly the result of the development of an incorporated model of personality called the Big Five, or Five Factor Model of Personality. A better considerate of the personality traits of members of the profession is also mandatory; to deliver a complete pictures of the way in which pharmacists should attempt to revolutionize pharmacy practice (Hall et al., 2013). But the personality study in Pharmacy work domains for employee selection and leadership evaluation is still an unexplored area of research in Pakistan.

AIMS AND OBJECTIVE

The objective of the present study was to assess personality traits among pharmacists in Pakistan.

METHOD

A descriptive cross sectional study design was used to assess the personality traits among pharmacists in twin cities i.e. Islamabad (Federal Capital) and Rawalpindi of Pakistan. Study approval was taken from the Ethical Committee of Hamdard University (ref no HU/ER 556). Beside this approval was also taken from respective authorities of different institutions and pharmaceutical industries from where data was collected. Moreover, consent was also taken from the respondents and their confidentiality of information was also assured. The sampling frame was comprised of professionally qualified pharmacists working in public and private sector in twin cities i.e. (Islamabad (Federal Capital) and Rawalpindi (Twin City) of Pakistan. Study respondents included pharmacists working in academic institutions, healthcare facilities, non-profit NGO's, community pharmacies, pharmaceutical industries, pharmaceutical marketing and regulatory authority. Sample size was calculated using Raosoft® sample size calculator which was 382 to achieve 95% confidence level with 5% margin of error. Convenient sampling technique was used to select the respondents.

A pre-validated data collection tool BFI (Big Five Inventory) was used to assess personality traits of pharmacists. This is a 44-item inventory that measures an individual on the Big Five Factors (dimensions) of personality. These factors are Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness. Each of the factors is then further divided into personality facets (Goldberg, 1993). The score range for existence of extraversion is (24-27), neuroticism (26-28), consciousness (28-29), agreeableness (28-29) and openness (36-42). Falling out of range shows the absence of respective trait in a personality. Big five inventory questionnaire was used to collect data from the pharmacists. The questionnaire was self-administered to the respondents by the data collectors. After data collection, data was cleaned, coded and entered in SPSS version-21.

RESULTS

Out of 382 respondents, 48.7% (n=186) were males while 51.3% (n=196) were females. Of the total respondents, 16.2% (n=62) of the total respondents were working in public sector while 83.8% (n=320) were working in private sector. Results showed that 14.7% (n=56) were from industry, 38.7% (n=148) were from hospital, 5.8% (n=22) were from community pharmacies, 1.6% (n=6) were from regulatory authority, 11.3% (n=43) were from sales and marketing and 22.0% (n=84) were from academia. Regarding the experience of respondents, 30.9% (n=118) had working experience of less than one year, 51.8% (n=198) had working experience of 1-5 years, 13.6% (n=52) had an experience of 5-10 years while 3.7% (n=14) had working experience of greater than 10 years (Table 1).

Table 1 Demographic Characteristics.

Indicator		Total n (%)
Age	20-30Y	276 (72.3)
	31-40Y	97 (25.4)
	40-50Y	9 (2.4)
Gender	Male	186 (48.7)
	Female	196 (51.3)
Field of practice	Industry	56 (14.7)
	Hospital	148 (38.7)
	Community	22 (5.8)
	Regulatory	6 (1.6)
	Marketing	43 (11.3)
	Academia	84 (22.0)
	NGO's	23 (6.0)
Sector of practice	Private	320 (83.8)
	Public	62 (16.2)
Level of experience	<1 year	118 (30.9)
	1-5 years	198 (51.8)
	5-10 years	52 (13.6)
	>10 years	14 (3.7)
Level of qualification	Pharm D	271 (70.9)
	M.Phil	105 (27.5)
	PhD	6 (1.6)

The result highlighted that nearly half of the respondents 50.2% (n=192) agreed that they were talkative. Most of them, 72% (n=275) agreed that they were full of energy and 57%, (n=218) agreed to have a lot of enthusiasm. More than half of the respondents 56.8% (n=217) agreed that they were shy. Fifty percent of the respondents (n=191) agreed to have an assertive personality and 55.1% (n=209) perceived them social and outgoing (Table 2).

Table 2 Extraversion Trait among Pharmacists in Twin Cities of Pakistan.

Indicator	Strongly Disagree n (%)	Disagree a little n (%)	Neutral n (%)	Agree a little n (%)	Strongly agree n (%)
Is talkative	54 (14.1)	79 (20.7)	57 (14.9)	120 (31.4)	72 (18.8)
Is reserved	18 (4.7)	31 (8.1)	58 (15.2)	124 (32.5)	151 (39.5)
Is full of energy	18 (4.7)	48 (12.6)	98 (25.7)	127 (33.2)	91 (23.8)
Generates a lot of energy	48 (12.6)	46 (12.0)	101 (26.4)	112 (29.3)	75 (19.6)
Tends to be quite	22 (5.8)	46 (12.0)	123 (32.2)	126 (33.0)	65 (17.0)
Has an assertive personality	25 (6.5)	57 (14.9)	83 (21.7)	140 (36.6)	77 (20.2)
Is sometimes shy , inhibited	27 (7.1)	61 (16.0)	84 (22.0)	135 (35.3)	74 (19.6)
Is outgoing social	48 (12.6)	46 (12.0)	101 (26.4)	112 (29.3)	75 (19.6)

The results showed that, more than half of the respondents 54.7% (n=209) disagreed that they find faults with others. Most of the pharmacists, 73.3% (n=280) agreed that they were helpful and unselfish with others. Half of the respondents 56% (n=214) agreed that they stay calm in tense situations, 52.5% (n=208) disagreed that they start quarrel with others and 50 % (n=191) of them agreed that they stay quite. While, 45% (n=174) of the respondents agreed that they get rude with others and 10.5% (n=40) of the respondents disagreed that they cooperate with others (Table 3).

Table 3 Agreeableness Trait among Pharmacists in Twin Cities of Pakistan.

Indicator	Strongly Disagree n (%)	Disagree a little n (%)	Neutral n (%)	Agree a little n (%)	Strongly agree n (%)
Tends to find faults with others.	97 (25.4)	112 (29.3)	81 (21.2)	63 (16.5)	29 (7.6)
Is helpful and unselfish with others.	15 (3.9)	30 (7.9)	57 (14.9)	113 (29.6)	167 (43.7)
Starts quarrels with others.	124 (32.5)	84 (22.0)	75 (19.6)	60 (15.7)	39 (10.2)
Has a forgiving nature.	28 (7.3)	32 (8.4)	68 (17.8)	111 (29.1)	143 (37.4)
Is generally trusting	20 (5.2)	40 (10.5)	43 (11.3)	144 (37.7)	135 (35.3)
Can be cold and aloof	34 (8.9)	56 (14.7)	129 (33.8)	144 (29.8)	49 (12.8)
Is considerate and kind to almost everyone	15 (3.9)	25 (6.5)	61 (16.0)	158 (41.4)	123 (32.2)
Is sometimes rude to others.	52 (13.6)	63 (16.5)	93 (24.3)	125 (32.2)	49 (12.8)
Likes to cooperate with others.	8 (2.1)	32 (8.4)	48 (12.6)	139 (36.4)	155 (40.6)

Out of 382 respondents, 65.9% (n=252) agreed that they do a thorough job while 39.2% (n=150) thought they are careless. On the other hand, 40.8% (n=156) of the respondents disagreed to get easily distracted and 72.5% (n=277) agreed that they do things efficiently. Eighteen percent of the respondents (n=108) revealed that they were disorganized with things they do and 48.6% (n=182) agreed that they make plans and follow through them (Table 4).

Table 4 Consciousness Trait among Pharmacists in Twin Cities of Pakistan.

Indicator	Strongly Disagree n (%)	Disagree a little n (%)	Neutral n (%)	Agree a little n (%)	Strongly agree n (%)
Does a thorough job	22 (5.8)	43 (11.0)	66 (17.3)	125 (32.7)	127 (33.2)
Can be somewhat careless	66 (17.3)	62 (16.2)	104 (27.2)	112 (29.3)	38 (9.9)
Is a reliable worker	19 (5.0)	35 (9.2)	40 (10.5)	118 (30.9)	170 (44.5)
Tends to be disorganized	89 (23.3)	97 (25.4)	88 (23.0)	75 (19.6)	33 (8.6)
Tends to be lazy	84 (22.0)	65 (17.0)	80 (20.9)	108 (28.3)	45 (11.8)
Preserves until the task is finished	19 (5.0)	35 (9.2)	71 (18.6)	167 (43.7)	90 (23.6)
Does things efficiently	15 (3.9)	32 (8.4)	58 (15.2)	154 (40.3)	123 (32.2)
Makes plan and follow through with them	22 (5.8)	78 (20.4)	100 (26.2)	108 (28.3)	74 (19.3)
Is easily distracted	50 (13.1)	106 (27.7)	103 (17.8)	68 (17.8)	55 (14.4)

The results showed that nearly half of the respondents, 49.7% (n=304) disagreed that they are depressed. More than half of the pharmacists, 56% (n=214) agreed that they remain calm in tense situation, 56.3% (n=215) get tensed easily while 33.5% (n=128) of the respondents agreed to get nervous easily. Sixty percent of the respondents (n=227) agreed that they were moody (Table 5).

Table 5 Neuroticism Trait among Pharmacists in Twin Cities of Pakistan.

Indicator	Strongly Disagree n (%)	Disagree a little n (%)	Neutral n (%)	Agree a little n (%)	Strongly agree n (%)
Is depressed, blue	86 (22.5)	104 (27.2)	78 (20.4)	90 (23.6)	24 (6.3)
Is relaxed, handle stress well	19 (5.0)	64 (16.8)	86 (22.5)	112 (29.3)	101 (26.4)
Can be tense	30 (7.9)	67 (17.5)	70 (18.3)	144 (37.7)	71 (18.6)
Worries a lot	51 (13.4)	69 (18.1)	113 (29.6)	101 (26.4)	48 (12.6)
Is emotionally stable, not easily upset	29 (7.6)	61 (16.0)	79 (20.7)	158 (41.4)	55 (14.4)
Can be moody	32 (8.4)	63 (16.5)	61 (16.0)	139 (36.4)	87 (22.8)
Remains calm in tense situation	27 (7.1)	69 (18.1)	72 (18.8)	134 (35.1)	80 (20.9)
Gets nervous easily	50 (13.1)	89 (23.3)	115 (30.1)	84 (22.0)	44 (11.5)
Is depressed, blue	86 (22.5)	104 (27.2)	78 (20.4)	90 (23.6)	24 (6.3)

The results showed that out of the total respondents, 67.5% (n=258) disagreed that they come up with new ideas while 65.2% (n=249) agreed that they have active imagination. Out of total sample, 57.2% (n=230) agreed that they have few artistic interest and 70% (n=266) agreed that they are ingenious and deep thinker. Of the total 382 respondents, 66.7% (n=225) agreed that they are curious about different things and 13.6% (n=52) disagreed to be inventive. Out of total respondents 64% (n=244) agreed to prefer work that is routine (Table 6).

Table 6 Assessment of Openness among Pharmacists in Twin Cities of Pakistan.

Indicator	Strongly Disagree n (%)	Disagree a little n (%)	Neutral n (%)	Agree a little n (%)	Strongly agree n (%)
Is original comes up with new ideas	22(5.8)	47(12.3)	55(14.4)	136(35.6)	122(31.9)
Is curious about different things	25(6.5)	35(9.2)	67(17.5)	148(38.7)	107(28.0)
Is ingenious, a deep thinker	11(2.9)	51(13.4)	54(14.1)	146(38.7)	120(31.4)
Has an active imagination	19(5.0)	37(9.7)	77(20.2)	144(37.7)	105(27.5)
Is inventive	16(4.2)	36(9.4)	90(23.6)	153(40.1)	87(22.8)
Values artistic, aesthetic experiences	20(5.2)	25(6.5)	93(24.3)	166(43.5)	70(20.4)
Prefers work that is routine	20(5.2)	25(6.5)	93(24.3)	166(43.5)	78(20.4)
Likes to reflect play with ideas	21(5.5)	42(11.0)	98(25.7)	141(36.9)	80(20.9)
Have a few artistic interest	18(4.7)	43(11.3)	91(23.8)	140(36.6)	90(23.6)
Is sophisticated in art, music, or literature	42 (11.0)	61(16.0)	82(21.5)	115(30.1)	81(21.2)

Out of 382 respondents, females were found more extrovert than males with a mean score (25.1, ± 3.89). Of the total respondents, neuroticism exists in both males and females with mean score (26.2, ± 4.4) and (27.8, ± 3.88) respectively. Females were more conscious than males with mean score (28.9, ± 4.6). Openness was present more in females with mean score (36.8, ± 5.3). Results showed that respondents lying between 20-30 years were more extrovert with mean score (24.5, ± 4.2) than respondents above 30 years of age. Agreeableness was found high among pharmacists between 41-50 years of age with mean score (28.3, ± 2.6). Neuroticism was found high in all age limits, 20-30 years with mean score (27.3, ± 4.0), 31-40 years with mean score (26.4, ± 4.8) and 41-50 years with mean score (26.7, ± 2.2). Consciousness was high in respondents under age group 31-40 years with mean score (28.7, ± 4.4). Openness was not remarkable according to results in any age group. Extraversion was found high in pharmacists working in academia, community pharmacies, NGO's and Regulatory authorities with mean score (24.1, ± 4.0), (27.3, ± 4.2), (29.2, ± 1.3) and (24.0, ± 2.7) respectively. Agreeableness was found low in all studied fields of pharmacy. Neuroticism was high in industrial pharmacists with mean score (26.5, ± 4.3) and hospital pharmacists with mean score (27, ± 4.1). Openness was high in pharmacists in academia with mean score (36.5, ± 5.4) community pharmacists (36.8, ± 6.2), NGO's (39.8, ± 3.0) and regulatory authorities with mean score (36.1, ± 3.6). Extraversion was present in pharmacist working in both private and public sector with mean score (24.0, ± 4.6) and (24.4, ± 3.9) respectively. Neuroticism was found high in pharmacists working in government sector with mean score (27.2, ± 4.2). Consciousness was found high in pharmacists working in private sector with mean score (29.1 ± 4.6). Openness was low in pharmacist working in both private and government sectors (Table 7).

Table 7 Personality Traits of Pharmacists according to Different Demographic Characteristics.

Indicator	Extraversion Mean (\pm S.D)	Agreeableness Mean (\pm S.D)	Neuroticism Mean(\pm S.D)	Consciousness Mean (\pm S.D)	Openness Mean (\pm S.D)
Gender					
Male	23.5(4.14)	30.5(4.2)	26.2(4.4)	28.9(4.6)	34.2(5.2)
Female	25.1(3.89)	31.6(4.16)	27.8(3.88)	31.3(4.5)	36.8(5.3)
Age					
20-30	24.5(4.2)	31.5(4.2)	27.3(4.0)	30.7(4.7)	35.9(5.4)
31-40	23.9(3.8)	30.0(4.1)	26.4(4.8)	28.7(4.4)	34.5(5.2)
41-50	23.8(3.4)	28.3(2.6)	26.7(2.2)	30.1(4.9)	33.8(3.4)
Field of practice					
Healthcare Facility					
Industry	23.9(4.2)	30.5(4.1)	27.0(4.1)	29.2(4.6)	35.1 (5.4)
Academics					
Pharmaceutical company	23.3(3.0)	30.1(4.4)	26.5(4.3)	29.3(4.2)	33.1(4.9)
Community /Retail	24.1(4.00)	31.1(3.9)	31.1(3.9)	30.1(4.2)	36.5(5.4)
NGO	23.9(3.6)	30.4(3.7)	30.4(3.7)	30.0(4.4)	35.1(4.9)
Regulatory authority	27.3(4.2)	31.6(5.1)	31.6(5.1)	32.4(4.9)	36.8(6.2)
	29.2(1.3)	36.3(2.1)	36.3(2.1)	36.5(2.5)	39.8(3.0)
	24.0(2.7)	31.6(4.4)	31.6(4.4)	35.1(5.4)	36.1(3.6)
Sector					
Government	24.4(3.9)	31.2(4.1)	27.2(4.2)	30.4(4.7)	35.8(5.4)
Private	24.0(4.6)	30.0(4.9)	26.1(4.2)	29.1(4.6)	34.1(5.0)
Qualification					
Pharm D	24.3(3.9)	31.1(4.0)	27.1(4.1)	30.4(4.4)	35.5(5.2)
MPhil	24.7(4.5)	30.9(4.6)	27.0(4.5)	29.7(5.3)	35.9(5.7)
PhD	21.0(2.9)	26.6(4.9)	23.6(1.8)	27.5(3.9)	30.0(5.0)
Job experience					
< 1 year					
1-5 years	24.2(4.6)	31.1(4.7)	27.2(3.7)	30.2(4.8)	35.5(5.7)
5-10 years	24.9(3.5)	31.6(3.5)	27.4(3.9)	30.7(4.6)	36.4(4.8)
>10 years	23.1(4.5)	28.6(4.5)	25.4(5.8)	28.8(4.8)	32.9(5.7)
	23.1(2.8)	30.1(5.2)	26.2(2.1)	28.1(3.2)	32.8(5.1)

DISCUSSION

Personality theories have shown that individual's personality consists of a number of traits, the collection of which defines human beings as individuals. In particular, these personality traits are known as openness, agreeableness, conscientiousness, extraversion, and neuroticism. Extraversion consists of positive thoughts and experiences and thus, is considered as positive affect [11]. The results of the present study reported that extraversion trait was found high among the pharmacists in Pakistan. Most of them agreed that they were talkative, full of energy, enthusiastic but shy. Nearly half of them had assertive personality. Females were found more extrovert than men. Beside this, extraversion was found high in pharmacists working in academia, community pharmacies, NGO's and regulatory authorities. On the other hand, Pharm.D and M.Phil qualified pharmacists were found more extrovert than PhD. Moreover, extraversion was present in pharmacist working both in private and public sectors. Furthermore, pharmacists with less than one year experience and more than one till five years were more extroverts than other age groups. Similar findings were reported from a study conducted in Canada which highlighted that pharmacist possessed stronger expression of extraversion in their personalities [12].

An agreeable individual is basically self-sacrificing, sensitive to others and always ready to help others, and believes that others will be equally supportive [11, 13]. The current study highlighted that agreeableness trait was relatively low among pharmacists. Most of them disagreed that they find faults with others and start quarrel with others. Most of the pharmacists agreed that they were helpful, can stay calm in quiet and tense situation and only few agreed that they get rude with others. Agreeableness was found high among pharmacists between 41-50 years of age while agreeableness didn't exist in any other age group. Agreeableness was found low in all studied fields of pharmacy. Pharmacists with 5-10 years of working experience had relatively better quality to agree with others. Similar findings of low agreeableness were reported from a study conducted in South Africa [14]. However, in contrary to the findings of present study, agreeableness was reported high among pharmacists in Canada [5].

Neuroticism is a normal trait in any personality, representing the general affinity to practice negative effects such as anger, disgust, embarrassment, fear, guilt and sadness. High scorers may represent the risk of some types of psychiatric complications. A high neuroticism score represents that a person is susceptible to have irrational ideas, being less able to control desires, and coping poorly with stress. A low neuroticism score is indicative of emotional stability [15]. The results of the current study showed that neuroticism trait existed high among pharmacists. Neuroticism exists in both male and female pharmacists. Beside this, neuroticism was found high in all age groups. Neuroticism trait was high among industrial pharmacists and hospital pharmacists. Moreover, neuroticism was found high in pharmacists working in government sector. Neuroticism trait was found low among pharmacists with PhD degree. Pharmacists having work experience of 5-10 years have high neuroticism trait in their personality. In contrast to the results of present, a study conducted in Canada revealed that neuroticism trait was low in pharmacists [5].

The conscientious individual is focused, iron-willed and firm. Conscientiousness is established in achievement orientation (persistent and hardworking), reliability (liable and careful) and regularity [15]. The results of the present study revealed that pharmacists were found to be conscientious. Most of the pharmacists agreed that they do a thorough job, they do things efficiently, get easily distracted and organized with things they do. While few respondents agreed that they were somewhat careless and make plans and follow through them. Male pharmacists were more conscientious than females. Conscientiousness was high in respondents under age group of 31-40 years. Pharmacists working in private sectors were more conscientious than those working in government sectors. Similarly, pharmacists were found highly conscientious in a study conducted in Canada [5].

Openness is likely to have an exceptional individuality, willing to question power and ready to entertain new political, social and ethical ideas. Open persons are inquisitive about both outer and inner worlds, and their lives are experientially ironic. They are ready to entertain new ideas and unconventional values. Research had shown that openness to experience is related to success in teaching, consulting and adapting to change [15, 16]. The results of the current study showed that openness to experience trait was high among pharmacists in twin cities. Most of the pharmacists disagreed that they come up with new ideas. Most of the pharmacists agreed that they have active imagination, have few artistic interests, ingenious and deep thinker, and were curious about different things and preferred work that is routine. Openness was not remarkable according to results in any age group. Openness was reported to be found among pharmacists working in community and NGO's. Openness was found low among pharmacists working in both private and government sectors. Besides this, openness was relatively high in pharmacists with 1-5 years of working experience. Similar results were reported in a study conducted in Canada which revealed that openness to experience was found high in pharmacists [5].

CONCLUSION

The present study concluded that although, neuroticism a negative trait was found high among pharmacists in twin cities but it was encouraging to notice that pharmacists also possessed positive traits including extraversion, conscientiousness and openness in their personality. Positive traits were found higher among females, however, neuroticism was found high among both genders. Moreover, industrial pharmacists, hospital pharmacists and especially pharmacists working in government sectors possessed highest neuroticism. Psychological testing should also be a part of recruitment process in order to identify various traits of employees that are desirable for enhancing productivity of the organization. Effective interventions must be incorporated in on job training of pharmacist in order to help them overcome their negative traits so they can easily adopt the changes required for implementation of effective pharmacy practice model in Pakistan. Future research should be designed to evaluate the impact of these traits on job performance and degree of care provided by pharmacists.

ABBREVIATIONS

BFI	-Big Five Inventory
FFM	-Five Factor Model
SPSS	-Statistical Package for Social Sciences

CONFLICT OF INTEREST

The authors have no conflict of interest.

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