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Do brighter personalities matter? Relationship between personality and job satisfaction in working pharmacists

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ABSTRACT

Objectives: People satisfied with their jobs are more likely to have longer tenures and better performance. A major intrinsic factor contributing to job satisfaction is personality. Our study examined the relationship between personality and job satisfaction in a sample of United States pharmacists.

Materials and Methods: We created and deployed a composite web-based survey using constructs from the International Personality Item Pool based on the five-factor model, nine job satisfaction facets and relevant sociodemographic characteristics.

Results: Of 157 responses collected, 102 (94% female, 55% 35–44 years) made it to final analysis. Based on predetermined cutoffs, less than half of pharmacists in analyzable sample ($n = 43$ or 44%) were satisfied with their jobs. Others were either ambivalent ($n = 43$, 44%), or dissatisfied ($n = 11$, 11%). No demographic variable correlated positively with job satisfaction. For personality traits, only emotional stability and openness correlated with job satisfaction. The final regression model showed a moderately strong relationship between personality and job satisfaction (multiple $r = 0.579$). The five factor model trait, extraversion, negatively predicted job satisfaction ($B = -0.509$, $P < .001$). For occupational scales or traits predicting performance, stress tolerance and reliability positively predicted job satisfaction ($B = 0.348$; 0.271 , $P < 0.001$). At the individual facet level, there was significant difference in promotion opportunities means for black respondents (2.93 ± 0.99) compared to non-blacks (3.42 ± 0.86).

Conclusion: Extending results to organizational interventions for enhancing pharmacists' job satisfaction will include improving work operating conditions and assuring employees of all races fair chances at promotion and leadership development.

Keywords: Pharmacists, Personality, Job satisfaction, Five-factor model, International personality item pool

INTRODUCTION

Job satisfaction has been variously defined as the degree to which people like their jobs,^[1] or as a work attitude reflecting how people feel about their jobs, in terms of liking or disliking their jobs.^[2] This attitude is measurable at either the overall level or at individual levels of satisfaction for different aspects or facets of jobs such as pay, opportunities for promotion, nature of the work, operating conditions, and supervisors.^[2]

Behavioral science researchers are often interested in measuring predictors of job satisfaction because this construct has been shown to be related to employee motivation, job performance,

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organizational citizenship behaviors and organizational commitment.^[3] One associated premise for such interest is that individuals who are satisfied with their jobs are both likely to do well and to persist in their chosen careers.^[4] Furthermore, since humans find some of their identity in their work, people who are satisfied with their jobs are likely to be satisfied with other aspects of their lives.^[5]

The factors contributing to individuals being satisfied with their jobs can be categorized into extrinsic and intrinsic factors. One key intrinsic factor is an employee's internal disposition or personality, a measurable construct. One dominant theory in personality measurements is the Five Factor Model (FFM)^[6] also known as the Big Five traits of neuroticism (N), extraversion (E), agreeableness (A), conscientiousness (C), and openness to experience (O).^[7] As personality is demonstrated to be stable over time, there is a role for person-job fit where individuals select themselves into jobs (and work environments) where they are likely to succeed.^[8,9] Personality as measured by the FFM has been shown to be a predictor of academic success^[10] and career success^[11] in addition to being predictive of life^[12] and career or job satisfaction.^[12,13] Of the five factors, E, C, and N are the three most strongly correlated with job satisfaction^[13] with consistently negative associations for N.

Studies have also shown a relationship, albeit modest, between job performance and job satisfaction^[9] although whether one leads to the other or vice versa is yet to be fully determined.

The Hogan's Personality Inventory (HPI)^[14] is a personality measurement tool that is based on FFM. It was developed using socio-analytic theory and is used for predicting work effectiveness and occupational outcomes. The HPI which is linked with job performance^[15] was designed to measure the bright side of personality, by describing how we relate to others when we are at our best (or brightest).^[14,16]

During the COVID-19 pandemic, we saw first-hand how pharmacists rallied on the front lines and gave their best at work, going over, and above their given job responsibilities. Prior to the executive order directing pharmacies to begin COVID testing in 2020, one of us conducted a pulse survey on a convenience sample of female pharmacists in the Minority Women Pharmacists Association. The main concern with their individual job performance as noted by respondents was the availability of organizational resources, including labor and equipment (unpublished data). It has been established that extrinsic factors like these, which make up facets of job satisfaction, can impact job satisfaction.^[1,2,17-20]

Studies conducted using the HPI, reported that the most robust predictors of job performance ratings (and job satisfaction) were emotional stability (the opposite of N) and C.^[15] Since pharmacy is a profession involving high levels of attention to detail and disciplined focus, people who

describe themselves as conscientious may self-select into the profession. Based on this, we hypothesized that the FFM trait of C would significantly correlate with job satisfaction in working pharmacists. This current study therefore aimed to study the impact of the intrinsic personality factors and their relationship to job satisfaction using the HPI in a cluster sample of working pharmacists as identified through social media channels.

MATERIALS AND METHODS

The original HPI is a 206-item instrument consisting of seven primary scales (higher-level constructs) and six occupational scales. The original HPI scales are *adjustment*, *ambition*, *sociability*, *likeability (now labeled interpersonal sensitivity)*, *prudence*, *intellectance (now inquisitive)*, and *school success (now learning approach)*. The HPI scales and their associated FFM construct in parentheses are defined as follows: Adjustment is the degree to which a person is steady in the face of pressure, or conversely, moody, and self-critical (Emotional Stability). Ambition is the degree to which a person appears leader-like, and achievement-oriented (E). Sociability is the degree to which a person needs and enjoys social interaction (E). Interpersonal Sensitivity is the degree to which a person exhibits tact, social sensitivity, and perceptiveness (A). Prudence is the degree to which a person appears to be conforming and dependable, exhibiting self-control (C). Inquisitive is the degree to which a person seems imaginative, adventurous, and analytical (Intellect/O) and Learning Approach, the degree to which a person enjoys academic activities and values education as a suitable end (Intellect/O).

The six occupational scales based off the personality dimensions in the seven primary scales, describe attitudes and characteristics that have broad and general importance for job performance. They are described as follows:

1. Service orientation

Being attentive, pleasant, and courteous to customers.

2. Stress tolerance

Being able to handle stress, even-tempered, and calm under fire.

3. Reliability

Honesty, integrity, and positive organizational citizenship.

4. Clerical potential

Follows directions, pays attention to detail, communicates clearly.

5. Sales potential

Energy, social skills, and the ability to solve problems for customers.

6. Managerial potential

Leadership ability, planning, and decision-making skills.

Since the HPI is a commercially licensed instrument, we used representative items measuring similar constructs in it from scales developed in the International Personality Item Pool (IPIP).^[16,21,22] A representative mapping of the IPIP scales to HPI's primary scales and their associated FFM traits is shown in [Figure 1].

Survey creation, sampling, administration, and analysis

We created a web-based survey composed of a 100-item, 10-dimension IPIP representation of the HPI^[16,22] and the 36-item, 9-facet, Job Satisfaction Survey (JSS) developed by Paul Spector.^[23,24] The IPIP items consisted of positively or negatively worded brief descriptive statements such as "I rarely get irritated" and "I get stressed out easily." Participants were asked to rate their agreement with statements using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Negatively worded items were reverse coded (1 = strongly agree to 5 = strongly disagree) before survey deployment and analysis. We also incorporated four open-ended questions to assess respondents' perception

of relationship between personality and pharmacists' job satisfaction — **Q1:** *How do you think your personality contributes to your success on the job?* **Q2:** *Would you consider your personality to have changed over time in the course of your job tenure?* **Q3:** *What other professions do you imagine that someone with your personality might be happy working in?* and **Q4:** *What are personality traits that might make someone in your current job successful at their job?*

We deployed the survey from April to June 2021 using non-probabilistic, purposive voluntary response sampling of self-identified working pharmacists in the contiguous United States (US) through approved messages posted on social media channels. Surveys were administered using Qualtrics™ survey software. All statistical analyses were conducted using IBM SPSS Statistics version 28 — We determined survey items reliability using Cronbach's alpha of 0.7 as the minimum cutoff for including each item in the final analyses. Descriptive statistics are reported as means ± standard deviation for continuous measures and frequencies for categorical variables. Finally, we carried out Pearson's correlations and multiple regression analyses with two-tailed significance level set at $P < 0.05$. Beta weights and structure coefficients were used to evaluate importance of personality traits as predictors of job satisfaction after adjusting for defined demographic variables. For the open-ended items, descriptive adjectives for any terms relating to personality dimensions were extracted from the free text answers and tallied for ranking in terms of occurrence.

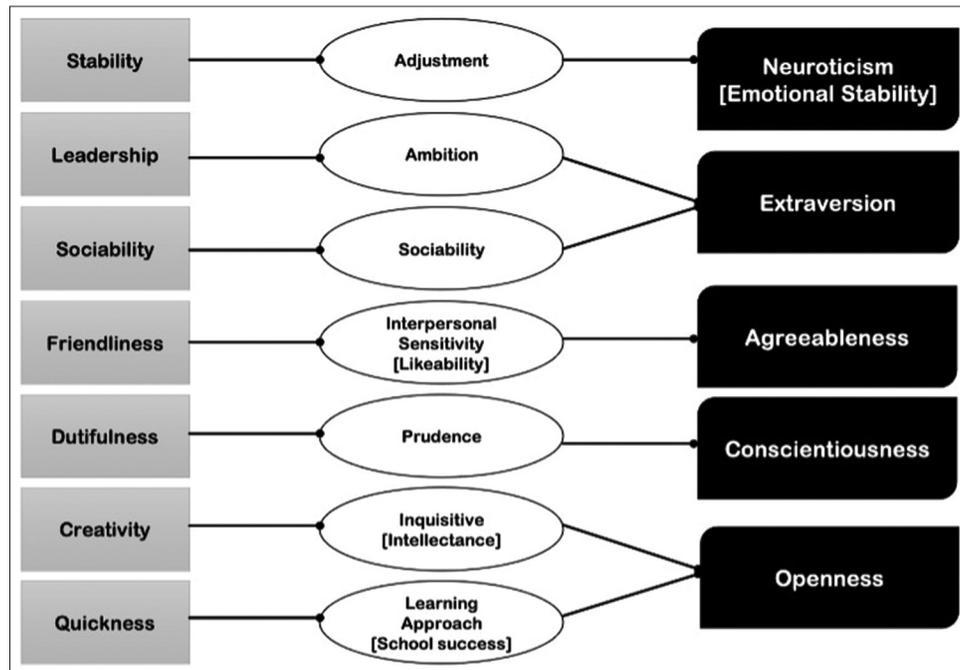


Figure 1: Representative map of international personality item pool constructs to the Hogan's personality inventory and the five-factor model.

Job satisfaction cutoffs

The absolute approach as recommended by Paul Spector^[23] — the creator of the original survey — was used to create a logical cutoff for job satisfaction within our sample. Taking the sum of usable item responses for all nine facets of the JSS yielded a continuous variable defined as *JSS Summed*. Since our item responses were coded on a 5-point scale, using an absolute score of 175 for 35 usable items, we recoded our scales to match the original JSS 6-point scale. This allowed us to obtain appropriate numbers for extrapolating cutoffs for three JSS bands: *Satisfaction*, *Ambivalence*, and *Dissatisfaction*.

Institutional review board (IRB) statement

This study was reviewed and approved by the IRB at Fairleigh Dickinson University and determined to fall under exempt human subject research.

RESULTS

A total of 157 responses were returned within the administration window. Of these, only 102 responses were usable (defined as completed the Likert scale questions in the combined survey). In the final analysis, not all respondents gave usable responses to all items and as such, means for all dimensions may not add up to 102 (or 100%). This is reflected in [Table 1].

Demographic characteristics

Most of the respondents identified as female ($n = 96$, 94%), and the rest as male ($n = 6$, 6%). The highest age range was between 25 and 65 years ($n = 100$). For more representative analysis, we binned race (or ethnicity) into a dichotomous variable representing Black ($n = 80$) and non-black ($n = 22$). Other characteristics including size and type of establishment where participants were employed, and respondents' geographical locations based on US census-designated regions are shown in [Table 2].

Survey reliability analysis

The Cronbach's alpha, α , for the co-administered surveys are shown in [Tables 3 and 4].

All α were 0.70 or greater, with inter-item correlations between 0.2 and 0.38 for the IPIP scale items, reflective of good reliability, or internal consistency.

For the JSS, α for all facets except OC were between 0.7 and 0.87. The initial α of 0.417 for the OC facet improved to 0.769 after removing one question (Q4: *My positive efforts to do a good job are seldom blocked*).

Survey characteristics

The means of all dimensions for IPIP items in the combined survey [Table 1] were at or above the midpoint (or 3 on a 5-point scale). The highest values, (mean \pm SD), were

Table 1: Descriptive statistics for the different scales used in final combined survey.

	<i>n</i>	Minimum	Maximum	Mean	SD
Personality traits					
Stability (emotional stability)	99	2.00	4.90	3.61	0.64
Leadership (extraversion)	99	2.10	5.00	3.93	0.59
Dutifulness (conscientiousness)	99	2.60	5.00	3.92	0.50
Creativity (openness)	101	2.40	5.00	3.86	0.49
Quickness (openness)	99	2.20	5.00	3.98	0.52
Occupational scales					
Calmness (Service Orientation)	99	2.10	5.00	3.81	0.51
Happiness (Stress tolerance)	100	1.90	5.00	3.88	0.61
Cooperation (reliability)	100	1.90	5.00	3.74	0.54
Toughness (clerical potential)	101	2.20	5.00	3.75	0.52
Competence (managerial potential)	99	2.80	5.00	4.08	0.48
Job satisfaction dimensions					
Communications	95	1.50	5.00	3.21	0.88
Contingent rewards	97	1.00	5.00	3.03	0.92
Coworkers	96	1.00	5.00	3.64	0.80
Fringe benefits	96	1.00	5.00	3.27	0.77
Nature of work	97	1.50	5.00	3.90	0.79
Operating conditions	96	1.00	4.67	2.91	0.98
Pay	94	1.00	5.00	3.03	0.99
Promotion	95	1.00	5.00	3.01	0.85
Supervision	94	1.50	5.00	3.63	0.93

observed for O, or quickness in the IPIP (3.98 ± 0.52), followed by E (3.93 ± 0.59) and C (3.92 ± 0.50). In terms of the occupational scales, managerial potential had the highest

mean value (4.08 ± 0.48) followed by stress tolerance (3.88 ± 0.61). For job satisfaction, the highest means were observed for nature of work (3.90 ± 0.79) and coworkers (3.64 ± 0.80) and the lowest mean, for operating conditions, was below the scale midpoint (2.91 ± 0.98). Comparing scale means across all demographic variables showed significant differences for C and age in the personality section and for promotion and race in the job satisfaction section. After tests for homogeneity of variances, ANOVA showed significant main effects for age and C, $F(3, 95) = 3.64, P < 0.05$. *Post hoc* analyses of main effects for age showed respondents aged 25–34 years had significantly lower means (3.68 ± 0.45) for C compared to those aged 35–44 years (3.97 ± 0.50) and those aged 45–54 years (4.13 ± 0.41). *Post hoc* analyses for race indicated that respondents who identified as Black had significantly lower dimension means (2.93 ± 0.99) for promotion compared with non-black respondents (3.42 ± 0.86).

Table 2: Sociodemographic characteristics for survey participants.

Baseline characteristic	Sample size (n=102)	
	n	%
Gender		
Female	96	94
Male	6	6
Race		
Black	80	78
Non-black*	22	22
Age (years)		
25–34	25	24
35–44	55	54
45–54	20	20
>65	2	2
Employment		
Private-for-profit	84	82
Federal Government	11	11
State Government	5	5
Other	2	2
Size of organization (Number of employees)		
1–49	41	40
50–99	13	13
250–999	10	10
>1000	38	38
Geographical location		
South	56	55
Northeast	33	32
Midwest	10	10
West	2	2

*Non-black made up of white (n=6), asian (n=9), Native Hawaiian/Pacific islander (n=1) and other (n=6)

Correlations of demographic characteristics with personality and job satisfaction dimensions

Results from Pearson's correlation analysis are shown in [Table 5]. No demographic variable correlated positively with job satisfaction. For FFM traits, only emotional stability (N) and O correlated with job satisfaction. These two traits are reflected by stability (the IPIP for the adjustment scale in the HPI) and creativity and quickness (IPIP constructs for the HPI's inquisitive and learning approach scales). All significant correlations were positive but weak to moderate ($r = 0.206$ – 0.445). At the individual job satisfaction scale level, coworkers and nature of work dimensions correlated with emotional stability/N ($r = 0.269$; $r = 0.445$), E ($r = 0.238$; $r = 0.308$), and O ($r = 0.225$, $r = 0.208$; $r = 0.272$). Contingent rewards and communications correlated with stability/N ($r = 0.336$; $r =$

Table 3: Internal consistency reliability statistics for IPIP scales representing the HPI.

Personality scales	Item number (n)	Cronbach's alpha	Inter-item-correlation
IPIP primary scales (FFM mapping)			
Stability (neuroticism)	10	0.859	0.383
Leadership (extraversion)	10	0.838	0.342
Dutifulness (conscientiousness)	10	0.746	0.244
Creativity (openness)	10	0.724	0.199
Quickness (openness)	10	0.783	0.274
Scale total	50	0.701	0.321
Occupational scales			
Calmness	10	0.765	0.252
Happiness	10	0.860	0.385
Cooperation	10	0.747	0.241
Toughness	10	0.747	0.240
Competence	10	0.768	0.252
Scale total	50	0.839	0.540
Total number of items	100	0.887	0.439

FFM: Five factor model, IPIP: International personality item pool

Table 4: Internal consistency reliability statistics for job satisfaction survey items.

Job satisfaction facets	Item number (n)	α
Communications	4	0.794
Contingent rewards	4	0.797
Coworkers	4	0.757
Fringe benefits	4	0.705
Nature of work	4	0.852
Operating conditions	3	0.769
Pay	4	0.834
Promotion	4	0.792
Supervision	4	0.871
Scale total	35	0.871

0.219) and O ($r = 0.247$; $r = 0.273$). Supervision correlated with stability/N ($r = 0.206$) and O ($r = 0.213$). Two facets had singular correlations: promotion with stability/N ($r = 0.255$) and operating conditions with O ($r = 0.237$). Fringe benefits was the only job satisfaction facet that correlated with C ($r = 0.246$), and O ($r = 0.225$; $r = 0.208$).

Since the HPI contains occupational scales linked to personality traits, we also included these scales in our bivariate correlation analysis. All five dimensions of the occupational scales correlated positively but weakly ($r = 0.30$ – 0.39) with overall job satisfaction. The scale with the highest number of correlations to facets of job satisfaction was managerial potential, which correlated positively with all facets except pay and promotion. No personality or occupational scale of the HPI correlated with pay as a job satisfaction facet.

Regression analysis

Using the job satisfaction cutoff determined for our sample showed that 44% of pharmacists ($n = 43$) were satisfied, 44% ($n = 43$) were ambivalent defined as neither satisfied nor dissatisfied, and 11% ($n = 11$) were dissatisfied with their jobs [Figure 2].

The final hierarchical regression model of personality traits and job satisfaction had a total of eight predictors, of which three were statistically significant [Table 6]. The model showed a moderately strong relationship with personality measured with the HPI scales (multiple $r = 0.579$). E was the only FFM personality trait negatively predicting job satisfaction in this model ($B = -0.509$). Two occupational scale traits; stress tolerance and reliability ($B = 0.348$ and 0.271) positively predicted job satisfaction. As a demographic variable, race was a significant negative predictor ($B = -0.248$) of job satisfaction [Table 5]. A relationship map constructed for race and job satisfaction reflects Black respondents reporting greater ambivalence and job dissatisfaction compared with other races [Figure 3].

Open ended items qualitative analysis

Answers for Q1: "How do you think your personality contributes to your success on the job?" ranged from partially to tremendously helpful to success on the job. In addition, respondents used the following top ranked adjectives to describe personality traits they considered contributing to success on the job; *calmness*, *flexibility (adaptability)*, *friendliness*, *focus*, *goal orientation (go-getting)*, and *hardworking (conscientious)*. For Q2: "Would you consider your personality to have changed over time in the course of your job tenure," 44 out of 70 respondents (63%) indicated Yes to their personality changing. Some reasons given for perceived change included "increased workload" and "stress on the job," both work-related and extrinsic factors. The ascribed personality changes were described in both negative and positive terms. Negative descriptions were reflected in terms such as "increased cynicism and skepticism," "decreased optimism and motivation," "decreased cheerfulness." While positive descriptions included terms such as "increased flexibility," "more openness," "greater adaptability," and, "heightened sensitivity to work-life balance." For Q3: "What other professions do you imagine that someone with your personality might be happy working in?" the top five ranked professions were medicine (including nursing and other healthcare fields); accounting; real estate; event planning; any job with a focus and impact on people's lives. For Q4: "What are personality traits that might make someone in your current job successful at their job?" lay descriptors were varied but the most used adjectives in the responses were *empathy*, *compassion*, *confident (E)*, *assertiveness (E)*, *quick learner*, *proactive*, *problem solver*, *patient*, *outgoing (E)*, *open-mindedness (O)*, *optimism (S/N)*, *hard work (C)*, *attention to detail (C)*, *personable (A)*, *positive attitude (S/N)*, and *extroversion (E)*. Descriptors listed for this question have been used in various descriptions of the FFM traits abbreviated in parentheses.

DISCUSSION

To the best of our knowledge, our study is the first of its kind to probe relationships between personality and job satisfaction in US pharmacists using the HPI or bright side personality inventory measure. In this sample of working pharmacists, C, despite appearing positively correlated with job satisfaction, was not predictive in the regression model. This is in contrast with studies showing both positive correlations and predictiveness for C and job satisfaction.^[13,25] Our study is however not anomalous in showing correlation without a predictive relationship for C and job satisfaction. In studies of bank employees in the Southeastern US^[8] and police officers in Cyprus^[26] for example, there was no significant relationship between this FFM trait and job satisfaction. A study by Nilsen et al.^[27] examined the relationship between calling, congruence (job-person fit) and personality as predictors of job satisfaction and length of tenure on the job across different occupations

Table 5: Pearson correlations for personality and job satisfaction.

	JSS Summed	Age	Gender	Race	Size Est	Employ	N	E	C	O	O	CO	CR	CW	FB	NW	OC	PY	PR	SP
JSS Summed	--																			
Age	-0.053	--																		
Gender	-0.105	-0.003	--																	
Race	-0.193	0.026	0.072	--																
Size Est	0.075	-0.171	0.057	0.140	--															
Employ	-0.055	0.175	0.103	0.142	-0.079	--														
Stability (N)	0.321**	0.068	-0.096	-0.005	-0.098	-0.176	--													
Leadership (E)	0.147	0.034	-0.133	0.089	-0.073	-0.063	0.390**	--												
Dutifulness (C)	0.133	0.256*	0.004	0.094	-0.014	-0.064	0.325**	0.116	--											
Creativity (O)	0.217*	0.018	-0.220*	-0.043	-0.033	-0.065	0.297**	0.585**	0.179	--										
Quickness (O)	0.233*	-0.104	-0.083	0.178	0.146	-0.043	0.221*	0.488**	0.197	0.429**	--									
Comms (CO)	0.820**	-0.058	0.050	-0.060	0.024	0.010	0.219*	0.148	0.001	0.151	0.273**	--								
Cont Rewards (CR)	0.859**	-0.099	-0.143	-0.168	0.121	-0.027	0.336**	0.076	0.147	0.247*	0.153	0.646**	--							
Coworkers (CW)	0.670**	0.067	-0.076	-0.149	0.026	-0.103	0.269**	0.238*	0.089	0.273**	0.220*	0.482**	0.550**	--						
Fringe ben (FB)	0.568**	0.024	-0.177	-0.065	0.046	0.053	0.092	0.088	0.246*	0.225*	0.208*	0.372**	0.529**	0.201	--					
Nature work (NW)	0.540**	0.104	-0.088	-0.155	0.088	-0.013	0.445**	0.308**	0.184	0.272**	0.160	0.387**	0.391**	0.342**	0.272**	--				
Oper condtns (OC)	0.671**	-0.118	0.137	-0.082	0.122	-0.009	0.119	0.068	0.144	0.076	0.237*	0.601**	0.546**	0.413**	0.197	0.401**	--			
Pay (PY)	0.741**	-0.007	-0.037	-0.193	0.042	-0.036	0.134	-0.037	0.006	0.066	0.046	0.575**	0.569**	0.307**	0.481**	0.281**	0.447**	--		
Promotion (PR)	0.692**	-0.067	-0.162	-0.247*	-0.061	-0.168	0.255*	0.041	-0.057	0.090	0.021	0.527**	0.623**	0.368**	0.349**	0.322**	0.300**	0.532**	--	
Supervision (SP)	0.789**	-0.155	-0.117	-0.153	0.108	-0.048	0.206*	0.091	0.146	0.160	0.213*	0.596**	0.668**	0.620**	0.316**	0.238*	0.466**	0.512**	0.439**	--

Figures in bold represent FFM constructs with positive correlations. **Correlation significant at the 0.01 level (2-tailed). *Correlation significant at the 0.05 level (2-tailed)

Table 6: Regression table with coefficients^a.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	61.849	21.925		2.821	0.006		
	Leadership	-19.354	6.863	-0.509	-2.820	0.006*	0.240	4.172
	Dutifulness	-8.302	5.394	-0.186	-1.539	0.127	0.537	1.862
	Quickness	8.372	4.593	0.194	1.823	0.072	0.694	1.440
	Happiness	12.816	5.045	0.348	2.540	0.013*	0.416	2.402
	Cooperation	11.261	5.311	0.271	2.120	0.037*	0.480	2.082
	Race	-13.459	4.944	-0.248	-2.722	0.008*	0.939	1.065
	Size Establishment	0.873	0.714	0.112	1.224	0.224	0.932	1.073
	Toughness	15.794	8.459	0.366	1.867	0.065	0.203	4.917
Model summary								
Model	R	R square	Adjusted R square	Std. Error of the estimate				
1	0.579 ^a	0.335	0.272	19.09960				
ANOVA								
Model		Sum of squares	df	Mean square	F	Sig.		
1	Regression	15614.507	8	1951.813	5.350	<0.001 ^b		
	Residual	31007.536	85	364.795				
	Total	46622.043	93					

^aPredictors: (Constant), Leadership, Dutifulness, Quickness, Happiness, Cooperation, Toughness, Race, Size Establishment. ^bDependent variable: JSS summed *P < 0.001, JSS: Job satisfaction survey

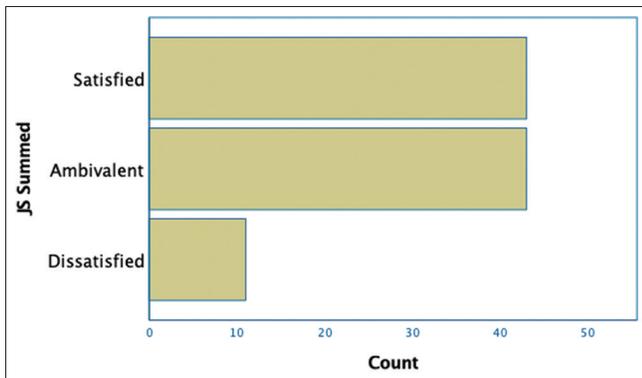


Figure 2: Job Satisfaction category counts job satisfaction survey summed score total = 175 satisfaction—score > 119 ambivalent—score ≥ 91 ≤ 119 dissatisfaction—score < 91.

and found a lack of prediction for C and job satisfaction in some occupations.^[27] The moderating role of this FFM trait on job satisfaction in pharmacists can be further explored. Could it be that pharmacy selects for people already high in C and so this trait may not be suitable for predicting job satisfaction in jobs with high attention to detail such as pharmacy, banking, and policing?

On the other hand, numerous studies found E to be positively correlated with job satisfaction.^[4,12,13,28,29] This was not the case in our study where E was a significant negative predictor of job satisfaction. Although our study is not the first to report

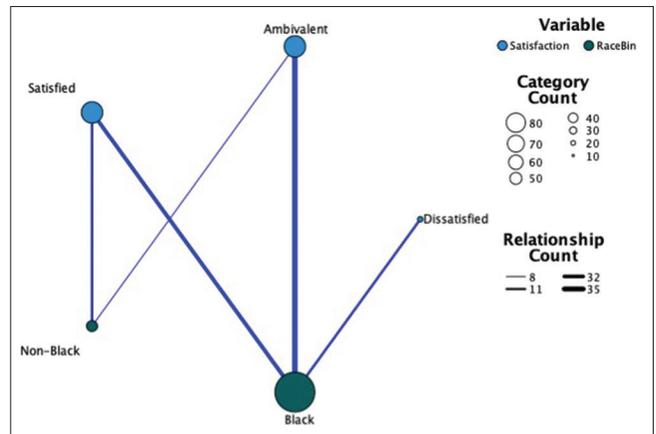


Figure 3: Relationship map for the demographic variable race and job satisfaction.

no or negative prediction for E and job satisfaction,^[8,30,31] this is nevertheless an interesting finding. One may postulate that because pharmacy is a profession in which social interactions abound, people who are extroverted are more likely to be satisfied with their jobs. This conception, backed by the open-ended item regarding personality descriptors for successful job performance in pharmacists (Q4). In those textual responses, adjectives like confident, assertive, and outgoing, all related to E were some of the most highly ranked descriptors.

Since our sample consisted mostly of respondents identifying as female (94%), one wonders if the inverse relationship between E and job satisfaction is mediated by gender. Although we were not able to conduct second level interaction effects for gender, one study of personality and job satisfaction among South African Anesthetists showed negative correlation with E and positive correlation and increasing job satisfaction with male gender.^[32] Other studies, including those with specific focus on pharmacists have shown job satisfaction correlating with self-reported gender; females reporting greater satisfaction than males.^[33-36]

The other aspect of this relationship between E and job satisfaction considers interpersonal job context as a dimension of person-job fit. It has been shown that the relationship between E and job satisfaction is magnified by the extent to which job holders are exposed to social interactions on the job.^[37] If increased job satisfaction has been associated with E and male gender,^[3,26,32] it stands to reason that the preponderance of females in our sample of a high social interactivity profession may account for this trait being a negative predictor of job satisfaction.

Race was also negatively associated with job satisfaction with respondents who self-identified as Blacks reporting greater dissatisfaction. Looking at the different facets of job satisfaction, there was a significant negative correlation between Black race and promotion. In this study sample, we also observed a somewhat moderating effect of age on C with older pharmacists self-reporting as more conscientious than younger pharmacists. A study by Topino *et al.*^[25] showed a moderating effect of age as well but in the opposite direction, with younger workers showing greater positive correlations between C and job satisfaction.

We note that two occupational scale traits: stress tolerance and reliability from the HPI, positively predicted job satisfaction in this sample of working pharmacists. The nature of pharmacy work in certain practice areas such as private for-profit retail corporations involves a high amount of stress; therefore, working pharmacists with self-reported higher stress tolerance may be more likely to report greater job satisfaction. Job satisfaction has been shown to vary by practice setting, with community pharmacists reporting lower levels of satisfaction compared with other settings.^[17-20,36]

In terms of the individual facets of job satisfaction, there was no correlation with pay for all personality traits. Although studies on American workers have shown dissatisfaction with the pay facet of their jobs,^[38] the lack of correlation in our study may be because pharmacy professionals are generally well-paid,^[36] and no huge pay discrepancies within roles exist. Finally, emotional stability, although not significantly predictive of overall job

satisfaction (or *JSS summed*), when broken down by facets was correlated with the highest number of job satisfaction facets, followed by O. This is in line with numerous studies that have shown either C to be positively correlated^[3,4,12,29] and N (the opposite of stability) to be negatively correlated with job satisfaction.^[13,25,26,32,39]

Study limitations

Our study had several limitations. First, the small sample size including a gender and race skew (predominantly female and Black respondents) due possibly to the non-probabilistic sampling used means that our results may not be generalizable to a broader population of working pharmacists. While studies on workers in public and private sectors have shown no effect of organization type on job satisfaction,^[40] due to small sample size, we could not further stratify demographic groupings to account for defined pharmacy practice areas. Second, using a combination of scales meant that not all the HPI scales could be used. As such we selected five traits each, from the primary and occupational scales, that we considered suitable for the category of professionals in our study. Third, although we report good reliability coefficients, survey data are based on self-reports which could impact survey reliability. Finally, the 136-item combined survey increased final administration time to approximately 20 min. For busy pharmacy professionals, the resultant survey fatigue due to survey length and completion times may account for the moderate number of fully completed responses (102 of 157).

CONCLUSION

Our study showed that pharmacists are either generally satisfied or ambivalent about their jobs, but that this satisfaction may be moderated by race. We confirm previous studies showing a relationship between personality and job satisfaction, with E being a significant negative predictor for pharmacists in our sample.

Taking the means for individual facets of job satisfaction into consideration, we suggest two interventions for pharmacy leaders to elevate professional pharmacy work to reflect the International Labor Organization's definition of decent work.^[41] These include improving work operating conditions and assuring all employees fair chances at promotion and leadership development.

Future studies of this kind could be developed for different pharmacy sectors using representative samples of pharmacists for demographic variables such as age, sex, race, and type of organization. This will enable proper interrogation of the moderating roles of any such variables on the relationship between personality and job satisfaction.

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Declaration of patient consent

Institutional Review Board (IRB) permission obtained for the study.

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Conflicts of interest

There are no conflicts of interest.

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