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RESEARCH

Exploration of the entrepreneurial orientation and trait emotional intelligence in practicing pharmacists

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ABSTRACT

Objectives: The objectives of this study were 3-fold: to determine if there are differences in the level of entrepreneurial orientation (EO) of pharmacists in 5 upper Midwestern states; to determine if the EO of the pharmacists differs with age, sex, employment status, practice setting, or practice role; and to determine if there is a positive association between trait emotional intelligence (EI) and EO.

Design: Item analysis, descriptive statistics, 1-way analysis of variance, Tukey test, Levene test of homogeneity of variances, Kruskal-Wallis tests, Pearson correlation coefficients, and an independent samples *t* test were used to analyze survey data.

Setting and participants: Pharmacists in upper Midwest states.

Outcome measures: EO and trait EI of pharmacists.

Results: Pharmacists practicing in different settings exhibited no differences in EO; however, statistically significant differences were found in the EO of pharmacists by sex, age, and practice role. Pharmacists who owned a pharmacy had higher mean EOs for the constructs risk-taking, innovativeness, proactiveness, and autonomy. A positive correlation was found between global trait EI and all constructs of EO, suggesting that global trait EI could be used to predict EO in individuals.

Conclusion: It was identified that EO can be measured at the individual level. A high EO suggests that a person may have a higher interest or success with entrepreneurial activities. High levels of EO were found among pharmacists in the roles of owner or manager than those in the role of staff. A positive correlation was found between global trait EI and all constructs of EO, suggesting that global trait EI could be used to predict EO in individuals. Understanding EO at an individual level could be valuable to pharmacists who are interested in owning a pharmacy or in providing new patient services. A high trait EI could indicate greater entrepreneurial potential leading to greater career success.

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Background

As the American health care system evolves, the role of the pharmacist changes, shifting from a dispensing focus to a service-oriented, patient-focused approach.^{1,2} This shift requires the pharmacists to develop new skills and provide new services. Demands for direct patient services provided by the pharmacists continue to increase in both community and

institutional pharmacy settings. Pharmacists must capitalize on these opportunities. Seeking ways to incentivize these new services and roles is important to delivering high-quality and cost-effective care leading to improved patient outcomes.³ To thrive in this type of practice environment, pharmacists need a strong foundation in entrepreneurship to prepare them to succeed independently as entrepreneurs or as intrapreneurs within larger organizations.⁴

Compared with other health professionals, pharmacists are the most likely to be involved in entrepreneurship.^{1,5} Entrepreneurial pharmacists seek to push the boundaries of their business and profession by offering new areas of service.^{1,6} The process of entering new or established markets with novel or existing goods or services is considered entrepreneurship.⁷

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Key points**Background:**

- Understanding entrepreneurial orientation (EO) at an individual level could be valuable to pharmacists who are interested in owning a pharmacy or in providing new services to their patients.
- Identifying entrepreneurial pharmacists with high trait emotional intelligence (EI) within this group could indicate greater entrepreneurial potential and, in turn, greater career success.

Findings:

- High levels of EO were found in pharmacists practicing in the roles of owner or manager than those in the role of staff, suggesting these pharmacists may have higher interest or success with entrepreneurial activities.
- A positive correlation was found between global trait EI and all constructs of EO, suggesting that global trait EI can be used to predict EO.
- A high EO has been linked to a proclivity for owning one's own business; therefore, additional entrepreneurship training opportunities may be of value to these pharmacists.

Entrepreneurial orientation (EO) describes how entering a market with goods or services is accomplished through process, practice, and decision-making activities.⁶

In a study of the EO of community pharmacies, a high EO was linked to successful pharmacy performance. A pharmacy with high EO is intentional about strategizing and using its resources to develop new pharmacy services.⁸ EO has been studied at the firm level and at the individual level and is thought to be transferrable between the two.⁹ To date, a small number of studies have been conducted evaluating the EO of a pharmacy; however, there is no research evaluating the EO of practicing pharmacists.^{6,8,10}

Trait emotional intelligence (EI) is a personality trait that has been shown to predict entrepreneurial outcomes.¹¹ Trait EI is self-reported and is a measure of self-perception and emotion-related dispositions. Personality facets related to trait EI include adaptability, assertiveness, emotion perception, emotion expression, emotion management, emotion regulation, impulsiveness, relationships, self-esteem, self-motivation, social awareness, stress management, trait empathy, trait happiness, and trait optimism.¹²

It has been suggested that individuals with a high trait EI are able to interact effectively with other people, are more tolerant to stress, and typically have higher affectivity linked to creativity and proactivity, all of which are associated with entrepreneurial behavior.^{11,13,14} Individuals who can regulate and use their emotions effectively are more likely to believe they can be entrepreneurial and, thus, find more opportunities to develop a new service or business.¹⁵ Training those with entrepreneurial potential to understand, manage, and

successfully use their emotions in challenging situations may provide a competitive advantage leading to greater entrepreneurial success.¹⁵

Trait EI affects entrepreneurial behavior through 2 established processes. One process is the self-evaluation of emotional efficacy. The second process through which trait EI affects entrepreneurial behavior is at a cognitive level. Individuals with high self-perceived EI have been associated with a higher affectivity, which leads to proactive and creative dispositions. These behaviors facilitate entrepreneurial performance. Emerging evidence suggests trait EI is a highly useful concept in career success and as a predictor of career-related performance outcomes.¹³

Understanding EO at an individual level could be valuable to pharmacists who are interested in owning a pharmacy or in providing new services to their patients. Identifying entrepreneurial pharmacists with high trait EI within this group could indicate greater entrepreneurial potential and, in turn, greater career success.

Objectives

The objectives of this study were 3-fold: to determine if there are differences in the level of EO of practicing pharmacists in 5 upper Midwest states; to determine if the EO of pharmacists differs with age, sex, employment status, practice setting, or practice role; and to explore the relationship between trait EI and EO to determine if there is a positive association.

Methods

Study details were approved by the North Dakota State University Institutional Review Board. District Five Boards of Pharmacy located in North America were contacted to solicit lists of practicing pharmacists within each study state. The final list of potential participants included 16,157 pharmacists. A simple random sample of 2000 participants was generated from this list using Microsoft Excel 2013 (Microsoft Corp, Redmond, WA).^{16–18} All pharmacists practicing within the upper Midwest study states had an equal chance of being selected for inclusion in the study.

The Entrepreneurial Orientation-Trait Emotional Intelligence instrument (EO-tEI) is a 45-item scale used to measure the EO and trait EI of practicing pharmacists. The survey instrument ([Appendix 1](#)) is available on JAPhA.org as supplemental content. The EO-tEI was adapted from the EO instrument and the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF).^{19,20} Originally developed for use with firms, Hughes and Morgan¹⁹ EO scale items were reworded to account for the targeted respondents being pharmacists. Both the EO instrument and TEIQue-SF use a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). For this study, the Likert scales were modified from 7-point Likert scales (1 = strongly disagree to 7 = strongly agree) to 6-point Likert scales (1 = strongly disagree to 6 = strongly agree) with the neutral response option removed. The neutral option was removed to decrease the impact of satisficing, ambivalence, and social desirability bias.^{21,22}

All survey items were pretested with advanced pharmacy practice experience students enrolled in the professional pharmacy program at North Dakota State University to determine if the survey was adequate for a larger study. Based on the results of the pilot study, 4 instrument items were revised. All revisions were intended to improve clarity and comprehension for the reader.

The revised EO-tEI tool was used for the full-scale study. Descriptive statistics, including frequency and percentage, were used to examine demographic factors of practicing pharmacists in upper Midwest states. Participants were asked to indicate their general employment status and work environment including place of employment, zip code of place of employment, years of employment, and practice role. Information regarding age, year of initial licensure, educational experiences, sex, ethnicity, and state of pharmacy licensure was also requested from participants to better characterize the study population and to identify areas for future study.

Data for the full-scale study were gathered via an online survey using Dillman's Tailored Design Method.^{16,17} The survey was deployed using Qualtrics.²³ Participants were practicing pharmacists in upper Midwest states. Participants received an e-mail or a postcard with a printed link and QR code that could be used to access the survey instrument. Cochran's sample size formula for continuous data was used to calculate a required sample size.²⁴ It was determined that 385 respondents would be needed from a population of 16,157 pharmacists using an α level of 0.05 and 5% margin of error.^{25,26} Oversampling was employed to account for nonparticipation. An initial random sample of 1000 study participants was chosen using Microsoft Excel 2013.¹⁶⁻¹⁸ Within the random sample, 45 pharmacists were included from North Dakota, 243 from Iowa, 484 from Minnesota, 158 from Nebraska, and 70 from South Dakota. To potentially increase the number of respondents, a second random sample of 1000 participants was chosen using Microsoft Excel 2013.¹⁶⁻¹⁸

To determine the level of EO of practicing pharmacists, descriptive statistics including frequency, percentage, means, and standard deviations (SDs) were generated for each EO survey item. Levene test of homogeneity of variances and a Kruskal-Wallis test were used to evaluate differences between test groups. To compare the level of EO of North Dakota pharmacists with that of pharmacists in other states, 1-way analysis of variance (ANOVA) and the Tukey test were used to determine if there were statistically significant differences. The means and SDs were used to define the EO of pharmacists by state.

To further investigate EO in pharmacists, a 1-way ANOVA and the Tukey test were used to determine if there were statistically significant differences between the level of EO of practicing pharmacists and sex, age, type of pharmacy practice site, and by practice role of the pharmacist. Means and SDs were used to further define pharmacists' EOs by practice setting. An α level of 0.05 was set to determine statistical significance.

Descriptive statistics including frequency, percentage, means, and SDs were used to determine the level of trait EI of practicing pharmacists in the study population. Means and SDs were used to further define pharmacists' trait EI by their practice role. To determine if there were statistically significant differences in the level of trait EI between North Dakota pharmacists and pharmacists in other states, 1-way ANOVA

and the Tukey test were used to comparatively analyze participants by state. The means and SDs were used to define the trait EI of pharmacists by state. An α level of 0.05 was set to determine statistical significance. Pearson correlation coefficients were used to determine if there was a relationship between trait EI and the constructs of and overall level of EO. An α level of 0.05 was set to determine statistical significance. Data were analyzed using SPSS version 24.0 (IBM Corp, Armonk, NY).

Results

From the total sample of 2000 participants, there were 149 completed surveys eligible for analysis, approximately half of them were women ($n = 87$), whereas the rest were men ($n = 62$). The response rate for the study was 7.5%. Table 1 shows the

Table 1
Characteristics of Midwest pharmacists ($N = 149$)

Characteristic	Frequency	%
Sex		
Male	62	41.6
Female	87	58.4
Age, y		
21–30	32	21.5
31–40	48	32.2
41–50	26	17.4
51–60	25	16.8
61–70	14	9.4
71–80	4	2.7
Ethnicity		
Asian	1	0.7
Black or African American	4	2.7
Latino or Latina	1	0.6
White or Caucasian	142	95.3
Other	1	0.7
Level of education		
Bachelor's degree	149	100
Doctor of Pharmacy degree	106	71.1
Pharmacy residency	24	16.1
Certifications	23	15.4
Fellowship	1	0.7
Master of Science	4	2.7
Master of Art	1	0.7
Master of Public Health	1	0.7
Master in Business Administration	3	2.0
Doctor of Philosophy	2	1.3
Year licensed to practice pharmacy		
1961–1970	3	2.0
1971–1980	18	12.1
1981–1990	22	14.8
1991–2000	23	15.4
2001–2010	39	26.2
2011–present	44	29.5
State		
Iowa	39	26.2
North Dakota	18	12.1
Nebraska	23	15.4
Minnesota	58	38.9
South Dakota	11	7.4
Pharmacist role		
Owner	13	8.7
Management	40	26.8
Staff	92	61.7
Other	4	2.7

frequencies and percentages for sex, age, ethnicity, level of education, year licensed to practice pharmacy, state of residence of pharmacists, and pharmacist role. Most participants were employed as staff pharmacists (61.7%). Forty participants (26.8%) held management positions. Thirteen participants (8.7%) owned their own pharmacy. Four participants (2.7%) reported a practice role other than owner, management, or staff.

Internal consistency validation was performed using a Cronbach α coefficient test with a cut point of 0.70.²⁷ The overall Cronbach α for items hypothesized to measure EO was 0.90. The overall Cronbach α for items hypothesized to measure trait EI was 0.89. The results of the internal validation suggest that the study tool provided an internally consistent measure of the constructs used to evaluate the EO and trait EI of pharmacists.

The Levene test of homogeneity of variances found no differences between the variances in the population for EO subscales between states (risk-taking, $P = 0.747$; innovativeness, $P = 0.144$; proactiveness, $P = 0.256$; competitive aggressiveness, $P = 0.213$; and autonomy, $P = 0.196$). Similarly, a Kruskal-Wallis test showed there were no statistically significant differences between states for each EO subscale (risk-taking, $\chi^2_2 = 6.88$, $P = 0.143$; innovativeness, $\chi^2_2 = 3.18$, $P = 0.528$; proactiveness, $\chi^2_2 = 4.28$, $P = 0.370$; competitive aggressiveness, $\chi^2_2 = 2.68$, $P = 0.613$; and autonomy $\chi^2_2 = 4.44$, $P = 0.350$).

When evaluating the EO of pharmacists, no statistically significant differences were found among pharmacists in upper Midwest states for the constructs of risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy. This indicates that pharmacists practicing in upper Midwest states have comparable EOs. Of note, North Dakota pharmacists had overall higher means scores for autonomy than pharmacists in upper Midwest states. This aligns with the practice of pharmacy in North Dakota because North Dakota is the only state in the nation that requires a pharmacy to be owned by a pharmacist. This law naturally gives North Dakota pharmacists much more autonomy in their practices than pharmacists in other upper Midwest states because pharmacy procedures and policies are executed by pharmacy owners and not subject to corporate influence.

Pharmacists practicing full-time had an overall mean (SD) EO of 60.52 (11.53). Participants who had retired but continued to work part-time had an overall mean EO of 73.83 (7.14). Participants who were employed, but not as a pharmacist, had an overall mean of 67.50 (4.38). Participants who were retired had an overall mean EO of 56.67 (10.97), and those who were unemployed had a mean EO of 50.00 (5.66).

Table 2
Entrepreneurial orientation constructs by practice role of pharmacist (N = 145)

Construct	Owner (n = 14)	Management (n = 40)	Staff (n = 92)
Risk-taking	4.87 (0.66)	3.95 (1.05)	3.54 (0.95)
Innovativeness	5.05 (0.64)	4.78 (0.84)	4.41 (0.84)
Proactiveness	4.72 (0.64)	4.28 (0.88)	4.04 (0.88)
Competitive aggressiveness	4.21 (1.30)	3.90 (1.07)	3.67 (1.19)
Autonomy	5.10 (0.80)	4.43 (1.14)	3.92 (1.05)

Note: Values given are mean (SD). Mean reported scores on a 6-point scale (1 = strongly disagree, 6 = strongly agree).

Table 3

One-way ANOVA between-group comparison of entrepreneurial orientation constructs and practice role of pharmacist

Construct	df	F	Significance
Risk-taking	2	12.01	0.000
Innovativeness	2	5.30	0.006
Proactiveness	2	3.96	0.021
Competitive aggressiveness	2	1.45	0.237
Autonomy	2	8.90	0.000

Abbreviations used: ANOVA, analysis of variance; df, degrees of freedom.

Note: Statistically significant at the 0.05 level.

When evaluating the EO of pharmacists practicing in different settings, results of a 1-way ANOVA found there were no statistically significant differences among pharmacists in upper Midwest states for the constructs of risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy. Practice settings were categorized as independent community pharmacies, chain pharmacies (small- and large-chain community pharmacies, mass merchandiser pharmacies, and super-market pharmacies), clinic (pharmacies located near or in a medical clinic), health system (government or nongovernment hospital pharmacies), or other (home health or infusion, long term care or nursing home, specialty pharmacy, pharmacy benefit administration, academic institution, mail service, or other).

When evaluating the EO of pharmacists by sex, results of a 1-way ANOVA found there were statistically significant ($P < 0.05$) differences between 4 of 5 constructs of EO. The results for each construct were risk-taking ($F_{1,147} = 4.46$, $P = 0.036$), innovativeness ($F_{1,147} = 4.86$, $P = 0.029$), proactiveness ($F_{1,147} = 3.62$, $P = 0.059$), competitive aggressiveness ($F_{1,147} = 12.16$, $P = 0.001$), and autonomy ($F_{1,147} = 4.94$, $P = 0.028$).

When evaluating the EO of pharmacists by age, results of a 1-way ANOVA found there was a statistically significant ($P < 0.05$) difference between 1 of 5 constructs of EO. The results for each construct were risk-taking ($F_{5,143} = 6.17$, $P = 0.013$), innovativeness ($F_{5,143} = 0.81$, $P = 0.544$), proactiveness ($F_{5,143} = 1.32$, $P = 0.258$), competitive aggressiveness ($F_{5,143} = 1.73$, $P = 0.133$), and autonomy ($F_{2,146} = 1.71$, $P = 0.137$) (Table 2). Tukey honestly significant difference (HSD) test indicated that risk-taking was statistically significantly different among pharmacists aged 21–30 years and 61–70 years ($P = 0.039$) and also aged 21–30 years and 71–80 years ($P = 0.053$).

Results of a 1-way ANOVA found there were statistically significant ($P < 0.05$) differences between 4 of 5 constructs of EO by practice role of the pharmacist as shown in Table 3. The results for each construct were risk-taking ($F_{2,142} = 12.01$, $P < 0.001$), innovativeness ($F_{2,142} = 5.30$, $P = 0.006$), proactiveness ($F_{2,142} = 3.96$, $P = 0.021$), competitive aggressiveness ($F_{2,142} = 1.45$, $P = 0.234$), and autonomy ($F_{2,142} = 8.90$, $P < 0.001$). Tukey HSD indicated that risk-taking was statistically significantly different between pharmacists in the roles of owner and management ($P = 0.008$) and also in the roles of owner and staff ($P < 0.001$). Innovativeness was statistically significantly different between pharmacists in the roles of owner and staff ($P = 0.026$) and also in the roles of management and staff ($P = 0.047$). Proactiveness was statistically significantly different between pharmacists in the roles of owner and staff ($P = 0.025$). Autonomy was statistically significantly different between pharmacists in the roles of owner and staff ($P = 0.001$) and also in the roles of management and staff ($P = 0.030$).

Table 4

Correlation between global trait emotional intelligence and entrepreneurial orientation constructs

Category	Statistic	Risk-taking	Innovativeness	Proactiveness	Competitive aggressiveness	Autonomy
Global trait emotional intelligence	Pearson correlation	.181	.332	.367	.214	.267
	Significance (2-tailed)	.028	.000	.000	.009	.001
	N	149	149	149	149	149

Note: Correlation is statistically significant at the 0.01 level (2-tailed).

Pearson correlation coefficients were computed between global trait EI and constructs of EO. The results of the correlational analyses presented in Table 4 showed there was a positive correlation between global trait EI and all constructs of EO. Positive correlations were statistically significant at the level of 0.05 between trait EI and risk-taking, $r = 0.181$, $n = 149$, $P = 0.028$; innovativeness, $r = 0.332$, $n = 149$, $P < 0.001$; trait EI and proactiveness, $r = 0.367$, $n = 149$, $P < 0.001$; trait EI and competitive aggressiveness, $r = 0.214$, $n = 149$, $P = 0.009$; and trait EI and autonomy, $r = 0.267$, $n = 149$, $P = 0.001$.

Pearson correlation coefficients were computed between global trait EI and mean level of EO. The results of the correlational analysis showed there was a positive correlation between global trait EI and mean level of EO, $r = 0.348$, $n = 149$, $P < 0.001$.

Discussion

Entrepreneurship is a creative process in which an organization or an individual recognizes opportunity and builds an enterprise.²⁸ Important to the success of an organization or individual is their EO. The role of the pharmacist in the management of chronic disease expands health promotion and disease prevention and is linked to entrepreneurship.²⁸⁻³¹

This study builds on the limited research of EO in individuals. The Hughes and Morgan¹⁹ EO scale was chosen for this study because it is founded on the work of Lumpkin and Dess⁷ and can separately assess each construct of EO. This EO scale was originally developed for use with firms. In this study, the EO scale was used with both a student pharmacist and pharmacist population. Future research should focus on further validation of the instrument as a measure of individual EO in both pharmacist and nonpharmacist populations.

When evaluating the EO of pharmacists by sex, statistically significant differences were found among pharmacists in upper Midwest states for the constructs of risk-taking ($P = 0.036$), innovativeness ($P = 0.029$), competitive aggressiveness ($P = 0.001$), and autonomy ($P = 0.028$). When evaluating the EO of pharmacist by age, a statistically significant difference was found among pharmacists aged 21-30 years and pharmacists aged 71-80 years for the construct of risk-taking. When evaluating the EO of pharmacists by practice role, statistically significant differences were found among pharmacists in the upper Midwest states. The EO construct of risk-taking was statistically significantly different between pharmacists in the practice roles of owner and manager ($P = 0.008$). Innovativeness ($P = 0.026$), proactiveness ($P = 0.025$), autonomy ($P = 0.001$), and risk-taking ($P < 0.001$) were statistically significantly different between pharmacists in the roles of owner and staff. Innovativeness ($P = 0.047$) and autonomy ($P = 0.030$) were statistically significantly different between pharmacists in the roles of management and staff. No

difference was found for the construct competitive aggressiveness.

Future research should further examine the EO of owners and staff to determine if pharmacists in the role of staff are less likely to have a high EO because of limitations or barriers to their work. Likewise, are owners likely to have a high EO secondary to a high degree of autonomy? Do these pharmacists take advantage of such autonomy to be innovative and create new services or models of practice?

A positive correlation was found between global trait EI and all the constructs of EO. Positive correlations were statistically significant ($P < 0.05$) between global trait EI and risk-taking, global trait EI and innovativeness, global trait EI and proactiveness, global trait EI and competitive aggressiveness, and global trait EI and autonomy. Pearson correlation coefficients were computed between global trait EI and mean level of EO. A statistically significant ($P < 0.05$) positive correlation was also found between global trait EI and mean level of EO.

Trait EI has been shown to predict work performance, job involvement, and propensity for entrepreneurship.^{13,32,33} Trait EI affects entrepreneurial behavior through 2 established processes. One process is the self-evaluation of emotional efficacy. It has been established that individuals with high self-perceived EI are more likely to demonstrate a high tolerance to stress and environmental stressors at work.¹¹ These individuals will persevere when problems arise and seek out challenges on the job.³⁴ They also exhibit a higher degree of personal initiative and information-seeking behaviors.³⁴ Understanding this relationship between trait EI and entrepreneurship can help educators develop and promote entrepreneurial intention in students with the proclivity to provide new services or to own a pharmacy. Training programs for practicing pharmacists will accelerate this desired change.^{35,36} Providing more autonomy to practicing pharmacists, increasing available resources in their practice settings, and encouraging entrepreneurship will further transform the profession.³⁶

Limitations

This study had limitations. First, the response rate was relatively low. This may have led to a nonresponse bias. It is unknown if nonrespondents were different than the respondents. One factor contributing to the low response rate was mode of recruitment. Pharmacists practicing in Iowa and South Dakota were sent a postcard with a printed link to the online survey. Access to the online survey was less convenient for this subset of participants because the link was not electronic and not immediately available as compared with pharmacists who received an e-mail inviting them to participate in the survey. Second, respondents were not equally distributed across states, which may have led to a selection bias. It is

undeterminable whether the sample used in this study was representative of the target population. Therefore, caution should be used in generalizing these results to all pharmacists and pharmacies. Stratified sampling could have been used to ensure that an equal number of pharmacists from each upper Midwest state were represented in the sample.³⁷ Finally, the response or survey bias may have occurred because participants were asked to self-report their responses and may have not answered truthfully.

Conclusion

The findings of this study support existing theories related to EO. Through this research, it was identified that EO can be measured at the individual level. A high EO suggests that a person may have a higher interest or success with entrepreneurial activities. High levels of EO were found in pharmacists practicing in the roles of owner or manager as compared with pharmacists in the role of staff. A positive correlation was found between global trait EI and all the constructs of EO. This also supports the theory that there is a relationship between trait EI and entrepreneurship. The findings of this study suggest that global trait EI can be used to predict EO. A high EO has been linked to a proclivity for owning one's own business; therefore, additional entrepreneurship training opportunities may be of value to these pharmacists.

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Appendix 1

Instrument
 Entrepreneurial Orientation-Trait Emotional Intelligence
 (EO-tEI)

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Strongly Agree	
1	2	3	4	5	6	
1. The term 'risk taker' is considered a positive attribute for pharmacists	1	2	3	4	5	6
2. I am encouraged to take risks with new ideas	1	2	3	4	5	6
3. I am encouraged to explore and experiment for opportunities	1	2	3	4	5	6
4. I actively introduce improvements in my pharmacy	1	2	3	4	5	6
5. I am creative in how I perform my work tasks	1	2	3	4	5	6
6. I seek out new ways to do things	1	2	3	4	5	6
7. I always try to take the initiative in every situation	1	2	3	4	5	6
8. I excel at identifying opportunities	1	2	3	4	5	6
9. I initiate actions to which other pharmacies respond	1	2	3	4	5	6
10. I am intensely competitive	1	2	3	4	5	6
11. In general, I take a bold approach when competing	1	2	3	4	5	6
12. I respond to actions which competing pharmacies initiate	1	2	3	4	5	6
13. I am permitted to act and think without interference	1	2	3	4	5	6
14. I am allowed to make changes in the way I perform my work tasks	1	2	3	4	5	6
15. I am given freedom and independence to decide how to go do my work	1	2	3	4	5	6
16. Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6
17. I often find it difficult to see things from another person's viewpoint.	1	2	3	4	5	6
18. On the whole, I'm a highly motivated person.	1	2	3	4	5	6
19. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6
20. I generally don't find life enjoyable.	1	2	3	4	5	6
21. I can deal effectively with people.	1	2	3	4	5	6
22. I tend to change my mind frequently.	1	2	3	4	5	6
23. Many times, I can't figure out what emotion I'm feeling.	1	2	3	4	5	6
24. I feel that I have a number of good qualities.	1	2	3	4	5	6
25. I often find it difficult to stand up for my rights.	1	2	3	4	5	6
26. I'm usually able to influence the way other people feel.	1	2	3	4	5	6
27. On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6
28. Those close to me often complain that I don't treat them right.	1	2	3	4	5	6
29. I often find it difficult to adjust my life according to the circumstances.	1	2	3	4	5	6
30. On the whole, I'm able to deal with stress.	1	2	3	4	5	6
31. I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6
32. I'm normally able to "get into someone's shoes" and experience their emotions.	1	2	3	4	5	6
33. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6
34. I'm usually able to find ways to control my emotions when I want to.	1	2	3	4	5	6
35. On the whole, I'm pleased with my life.	1	2	3	4	5	6
36. I would describe myself as a good negotiator.	1	2	3	4	5	6
37. I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6
38. I often pause and think about my feelings.	1	2	3	4	5	6
39. I believe I'm full of personal strengths.	1	2	3	4	5	6
40. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6
41. I don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6
42. I generally believe that things will work out fine in my life.	1	2	3	4	5	6
43. I find it difficult to bond well even with those close to me.	1	2	3	4	5	6
44. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6
45. Others admire me for being relaxed.	1	2	3	4	5	6

GENERAL EMPLOYMENT STATUS AND WORK ENVIRONMENT

1. Please check the category that best matches your employment status.

_____ Practicing as a pharmacist

_____ Employed in a pharmacy-related field or position, but not practicing as a pharmacist

_____ Retired, but still working in pharmacy or employed part-time as a pharmacist

_____ Retired, do not practice pharmacy at all

_____ Employed in a career not related to pharmacy

- ____ Unemployed (check one: ☐ seeking ☐ not seeking employment)
2. Please check the item that best describes your primary place of employment.
- ____ Independent community pharmacy (fewer than 4 stores under the same ownership)
- ____ Small chain community pharmacy (4 to 10 stores under the same ownership)
- ____ Large chain community pharmacy (more than 10 units under same ownership)
- ____ Mass merchandiser (for example, Costco, Target, Wal-Mart)
- ____ Supermarket pharmacy
- ____ Clinic-based pharmacy (a licensed pharmacy located in or near a medical clinic)
- ____ Mail service pharmacy
- ____ Specialty pharmacy
- ____ Government hospital / health system (☐ inpatient ☐ outpatient)
- ____ Non-government hospital / health system (☐ inpatient ☐ outpatient)
- ____ Home health / Infusion
- ____ Nursing home / Long term care
- ____ Ambulatory care (e.g., medical clinic, office-based practice, not a licensed pharmacy)
- ____ Pharmacy benefit administration (e.g., PBM, managed care)
- ____ Academic institution _____
- Other organization, please describe: _____
3. What is the zip code for your primary place of employment? ____ _
4. Number of years employed by your present employer: _____ years
5. Which of the following best describes your current position?
- ____ Owner/partner/executive officer (If applicable, percent ownership: _____%)
- ____ Management (e.g. director, manager, assistant manager, supervisor)
- ____ Staff (e.g. clinical, consultant, staff, floater, or relief pharmacist)
- ____ Other (explain): _____

YOUR PRACTICE SITE

1. Pharmacists have started to provide a variety of services at their practice sites. From the list below, please indicate which services are provided at your practice site by pharmacists. Check all that apply.
- ____ Disease state management
- ____ Discharge counseling
- ____ Complex non-sterile compounding
- ____ Medication reconciliation
- ____ Medication therapy management services
- ____ Complex sterile compounding
- ____ Adjusting medication therapy
- ____ Health screening or coaching
- ____ Immunization
- ____ Point of care testing

- ____ Ordering lab tests
- ____ Collaborative practice agreements
- ____ Med to bed

2. Are the following monitored or evaluated at your primary work setting?

Activity	Yes	No
Patient satisfaction		
Quality of care		
Patient outcomes		
Patient safety		

3. Are you a part of an interprofessional health care team or group that is actively involved in the delivery of non-dispensing patient care activities?
- ____ Yes ____ No
4. Do you personally have regular, direct contact with a physician and/or other health care provider regarding patient care activities such as discussing medication therapy goals or outcomes of medication therapy (not including routine prescription refills or verification of orders)?
- ____ Yes ____ No
5. Is your practice setting currently involved in a patient-centered medical home?
- ____ Yes ____ No ____ Don't know
6. Is your practice setting currently affiliated with an accountable care organization?
- ____ Yes ____ No ____ Don't know

INFORMATION ABOUT YOURSELF

1. What is your age in years? ____
2. In what year were you first licensed as a pharmacist? _____
3. Please identify any educational experiences you have completed/earned? (check all that apply)
- ____ Bachelor of Science Pharmacy (BS)
- ____ Certificate program, please describe _____
- ____ Doctor of Pharmacy (PharmD)
- ____ Residency, please describe _____
- ____ Fellowship
- ____ Master of Science (MS)
- ____ Master of Arts (MA)
- ____ Master of Public Health (MPH)
- ____ Master of Business Administration (MBA)
- ____ Doctor of Philosophy (PhD)
- ____ Other, please describe _____
4. What is your gender? ____ Male ____ Female
5. How would you identify your ethnicity or race?
- ____ American Indian ____ Latino/Latina ____ Asian
- ____ White/Caucasian ____ Black/African American ____
- Other (specify): _____
6. In what U.S. states are you currently licensed as a pharmacist? (List all U.S. states) _____
7. What is the zip code of your current primary residence? ____ _