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Situational communication self-confidence among community pharmacists: A descriptive analysis

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Abstract

Objective: To compare community pharmacists' self-perceived communication confidence in prescription drug abuse and addiction (PDAA)-related scenarios to their self-confidence in other scenarios.

Methods: An 18-item survey instrument adapted from the Self-Perceived Communication Competence instrument was administered to 2000 licensed Tennessee community pharmacists. Items elicited communication confidence across common community pharmacy scenarios. Analysis of communication self-confidence scores across context, receiver, audience, and demographic variables was conducted.

Results: Mean self-confidence ratings ranged from 54.2 to 92.6 (0–100 scale). Self-perceived communication confidence varied across context, receiver, audience, personal and practice setting characteristics. Scenarios that involved PDAA communication with patients were scored significantly lower than non-PDAA patient scenarios (mean = 84.2 vs. 90.4, $p < 0.001$).

Conclusion: Community pharmacists are less confident in their ability to communicate with patients about PDAA as compared to non-PDAA scenarios.

Practice Implications: Engaging patients and prescribers in PDAA conversations is a critical component of preventing and treating PDAA. Research is warranted to further explore measures of situational communication self-confidence and interventions to optimize self-confidence beliefs across PDAA scenarios.

1. Introduction

Pharmacists are recognized as one of the most accessible and most trusted health professionals in the United States (US).¹ Of 295,000 licensed pharmacists in the US,

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Conflict of interest declaration

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approximately 130,000 are employed in community pharmacy settings, or 41 community pharmacists per 100,000 US citizens.^{2,3} Community pharmacists are well positioned to not only counsel their patients about medications but also to engage patients and communities in public health-related prevention efforts. Over the last few decades, pharmacists in the US have transitioned from being discouraged from discussing medications with patients to being required to do so by law.^{4,5} The role of pharmacist-patient communication in improving medication adherence and optimizing patient outcomes is supported in the literature.^{6,7} Likewise, barriers to engaging in said communication has also been reported.^{8–10}

Interpersonal communication is inherent in a majority of community pharmacists' efforts to educate and counsel patients, and to collaborate with other health care providers. Although a majority of communication scenarios occurring between pharmacists and patients or providers could be considered benign (e.g., describing how to take an oral antibiotic for the treatment of a respiratory tract infection), certain communication topics have the potential to place pharmacists in perceivably contentious situations. Prescription drug abuse and addiction (PDAA)-related communication is such a context. For the purposes of this study, prescription drug abuse was defined as nonmedical use, or use of a medication without a prescription, in a way other than as prescribed, or for the experience or feelings elicited.¹¹ Addiction was defined as compulsive drug seeking and use despite sometimes devastating consequences.¹¹

Prescription drug abuse and the ramifications thereof have increased substantially in the US over the last two decades, prompting the Centers for Disease Control and Prevention (CDC) to deem it epidemic in nature.¹² National-level strategies have been developed and implemented to combat prescription drug abuse from both supply (e.g., decreased prescribing/dispensing) and demand (e.g., increased screening for, referral to, and access to treatment) perspectives.^{13,14} Whereas the role of community pharmacists in PDAA prevention efforts has yet to be fully conceptualized, dispensing pharmacists do have a corresponding responsibility, along with prescribers, to ensure medications are dispensed for legitimate reasons and are required to evaluate drug therapy regimens for misuse or abuse.^{4,15} Given the interpersonal communication inherent in these activities, exploration of pharmacists' perceptions of their communicative skills and abilities is warranted.

Interpersonal communication competence has been conceptualized and defined in multiple ways over the last 25 years.^{16–19} McCroskey and McCroskey¹⁷ defined communication competence as “adequate ability to pass along or give information; the ability to make known by talking or writing.” Rubin et al.¹⁸ defined communication competence as “a person's ability to interact flexibly with others in a dyadic setting so that the communication is seen as appropriate and effective for the context”, thus placing additional emphasis on the setting and the information receiver's perceptions. Whereas self-perceived communication competence (SPCC) research has largely been atheoretical, the construct has been conceptualized as communicative self-efficacy.^{18,20} Competence tends to be ability or skill based and is assessed via validated metrics. For example, health professionals must pass board examinations with set minimum competencies for licensure. However, as a self-perception, competence could be interpreted as an ability judgment, or self-confidence. Therefore, when self-perceived, competence and confidence judgments in the context of

communication skills could be difficult to demarcate. Importantly, SPCC may or may not reflect actual communicative ability and may or may not align with objective competency assessments. Considering self-efficacy theory, perceptions of one's ability to complete a task influences engagement in the task.^{18,21,22} For example, if a community pharmacist feels she is not capable of communicating in a situation (irrespective of actual ability), or perceives she does not possess the skills to do so (irrespective of the skill set possessed), she is less likely to engage in the communication task. Previous research has identified a positive correlation between one's context-specific SPCC and willingness to communicate.^{17,23}

SPCC instruments with both trait (i.e., general disposition) and state (i.e., situational) foci have been developed and employed in communication competence research. McCroskey and McCroskey¹⁷ developed and validated the 12-item, trait-level Self-Perceived Communication Competence scale that assessed SPCC across receiver type (stranger, acquaintance, friend) and context (dyad, group, meeting, public). Rubin and Martin²⁴ developed and validated the trait-level, 30-item Interpersonal Communication Competence Scale that assessed 10 dimensions of interpersonal communication competence. Importantly, research has indicated state SPCC does not correlate heavily with trait SPCC.²⁵ Therefore, trait-level assessments of SPCC may not be valid indicators of state-level SPCC. For example, an individual who scores highly on a trait-level SPCC assessment may still experience low SPCC in specific situations, such as when communicating about PDAA-related topics. State-level communication competence instruments have been developed and used in medicine^{26,27} and dentistry,²⁸ and have noted that healthcare professionals lack confidence in uncomfortable communication contexts. Our preliminary research assessing community pharmacists' communication self-efficacy beliefs specific to PDAA supports these findings.¹⁰

SPCC specific to PDAA-related communication is generally unexplored, yet possession or development of confidence in abilities undergirds current national training efforts to prevent and treat PDAA.^{13,14} The purpose of this study was to explore community pharmacists' self-perceived situational communication confidence (SSCC) by adapting McCroskey and McCroskey's Self-Perceived Communication Competence instrument to contexts that present for this cohort.¹⁷ In particular, we sought to compare pharmacists' self-confidence specific to dyadic PDAA communicative tasks to self-confidence across other contexts. We hypothesized that pharmacists would rate their PDAA self-confidence significantly lower than their self-confidence in non-PDAA situations.

2. Methods

2.1. Design and pharmacist recruitment

The items analyzed in this study were part of a cross-sectional study of licensed Tennessee pharmacists conducted in October and November, 2012. Institutional Review Board approval was granted by East Tennessee State University prior to study initiation.

Pharmacist recruitment methodology has been described in a previous publication and was conducted in a manner that sought to maximize the number of actively licensed, practicing community pharmacist respondents.¹⁰ The researchers obtained a directory of pharmacists

(N = 2975) who had previously been or were currently affiliated with either the Tennessee Society of Independent Pharmacists or the Tennessee Society of Chain Pharmacists; two community pharmacist societies within the Tennessee Pharmacists Association (TPA). The directory did not represent a census of all currently licensed community pharmacists in the state. The Tennessee Board of Pharmacy does maintain a directory of pharmacists, including practice setting information provided by pharmacists when biennially renewing their licenses. However, a large percentage of practice setting information is missing in the Board directory; therefore, the TPA directory was employed to initially target community pharmacists. We thereafter cross-referenced the TPA directory with the publicly available Board directory of all licensed pharmacists (N = 9681) within the State of Tennessee.²⁹ Potential respondents listed in the TPA directory were excluded from the sampling frame if their license status was listed as anything other than active (e.g., retired) in the Board directory or if they had out-of-state addresses. The Board directory was then cleaned by the researchers and thereafter sorted by county of residence for each pharmacist. If the Board directory indicated less than 30 actively licensed pharmacists reside in a county (N = 47 counties), all pharmacist residents (N = 549) of those counties were included in the sample, regardless if those names were included in the TPA directory. We then randomly selected 1451 pharmacists from the TPA directory to obtain a total study sample of 2000 actively licensed pharmacists.

2.2. Survey administration and response rate

Survey administration followed a modified Dillman's Tailored Design Method and consisted of four paper-based mailings.³⁰ No incentive was offered to potential respondents. A pre-notification postcard was mailed to the study sample, followed one week thereafter by a packet that contained a personalized cover letter, an individually numbered survey instrument, and a self-addressed, stamped return envelope. The number on the survey instrument was used solely to remove respondents from subsequent mailing waves. Seven days later, a reminder/thank-you postcard was sent to all respondents for whom surveys had not been returned. To conclude participant recruitment, a second identical survey instrument packet was sent to all non-responders 10 days thereafter. The survey instrument was not numbered in the second packet.

Using the American Association of Public Opinion Research's Response Rate #2 calculation, a usable response rate of $749/1865 = 40.2\%$ was obtained.³¹ Given the focus on community pharmacists in this manuscript, only the 636 respondents who indicated they practice in a community pharmacy setting for a minimum of 8 h per month were included in the analyses.

2.3. Measures

2.3.1. Self-Perceived Situational Communication Confidence instrument—

Within a larger 55-item survey instrument assessing attitudes, beliefs, and behaviors regarding prescription drug abuse, an 18-item Self-Perceived Situational Communication Confidence (SSCC) instrument was adapted from McCroskey and McCroskey's¹⁷ Self-Perceived Communication Competence scale with emphasis placed on self-efficacy beliefs (i.e., self-confidence) as compared to self-competence. Whereas the same 0 to 100 response

scale was employed, the scale description was changed to reflect the situational self-efficacy focus (0 = completely unconfident; 100 = completely confident) of the instrument. Response anchors in the original instrument were 0 = completely incompetent; 100 = completely competent.

Respondents were asked to estimate their confidence in their ability to communicate in each of the situations. Eleven of the items were developed with particular emphasis on PDAA communication with varying audiences, receivers, and contexts. Seven items were included to assess self-confidence specific to common US community pharmacist conversations. For example, respondents were asked to estimate their confidence in their ability to counsel an established patient about a new diabetes medication and their ability to counsel a new patient about a cholesterol medication. Similar to the SPCC scale, both group (N = 4) and dyadic (N = 14) audience types were included. Five receiver types were assessed (patient, prescriber, pharmacist, stranger, student pharmacist). Nine of the items were perceived by the researchers to question the action(s) of others. Developed items were pre-tested with five community pharmacists and thereafter revised prior to large-scale instrument administration. Community pharmacists who participated in the pilot study were excluded from the larger study.

2.3.2. Demographic variables—Demographic items included: gender, years in practice, hours worked per week, practice setting type (e.g., independent, chain, supermarket/discount store), number of prescriptions dispensed per week, geographic region within the State,³² and practice county rural designation (whole, partial rural, not rural).³³

2.4. Statistical analyses

IBM SPSS Statistics version 22 was used to conduct all statistical analyses. P-values <0.05 were considered statistically significant. At most, less than 1% of data were missing for any of the SSCC items. Cases with missing data were deleted in a pairwise manner.

Descriptive statistics were computed and analyzed for all study variables. SSCC items were treated as interval-level variables and described using means, standard deviations, and 95% confidence intervals. Item descriptive statistics were analyzed across context, audience, and receiver type. Paired sample t-tests were used to compare differences in mean SSCC item responses. Independent sample t-tests, one-way analyses of variance (ANOVA), and Pearson correlations were used to examine differences in SSCC item scores across pharmacist and practice setting characteristics. Tukey's HSD tests were employed to examine one-way ANOVA post hoc differences across practice setting, geographic region, and rural designation.

3. Results

3.1. Descriptive analysis

Demographic characteristics of the study sample and descriptive statistics for the SSCC items are presented in Tables 1 and 2, respectively. The full range of the 0–100 response scale was used for all but one SSCC item (8). Mean self-confidence ratings ranged from 54.2

to 92.6. Fig. 1 presents means with 95% confidence intervals for all 18 items. Statistically significant differences were noted across multiple items.

3.2. Context analysis

Items assessing self-confidence in commonly occurring patient counseling scenarios (items 1, 3, 4, 5, 9) were rated strongly by pharmacists (means = 87.0–92.6). Self-perceived communication confidence ratings in scenarios that question the behaviors of others ranged from 70.8 to 91.2 (items 2, 3, 4, 7, 8, 11, 13, 14, 15). Scenarios that involved PDAA communication with patients were scored significantly lower than non-PDAA patient scenarios (mean = 84.2 vs. 90.4, $p < 0.001$).

3.3. Audience analysis

Statistically significantly lower item means were noted for three items (16, 17, 18) that presented situations in which a pharmacist would be communicating in a group setting (mean range = 54.2–65.6) as compared to dyadic scenarios. A fourth item, item 10, which assessed communication self-confidence when discussing blood pressure medications with a group of senior citizens had a mean score of 82.6.

3.4. Receiver analysis

Pharmacists' self-perceived communication confidence ranged from 80.8 to 91.2 for scenarios in which a prescriber is the receiver (items 2, 6, 11, 12, 13). Noticeably higher ratings were reported for two scenarios in which an opioid pain medication was self-prescribed by the prescriber (item 2, mean = 91.2) and when calling a prescriber with whom the pharmacist had already developed a relationship to discuss potential patient diversion of a pain medication (Item 6, mean = 88.6). Lower scores were noted when the pharmacist was communicating in regards to prescription legitimacy and addiction concerns.

For patient communication items (items 1, 3, 4, 5, 8, 9, 14), pharmacists' self-confidence ratings ranged from 77.4 to 92.6. Item 14 (Counsel an established patient about perceived opioid pain reliever abuse) was rated significantly lower than all other scenarios involving patient communication (mean 77.4), including items that could be considered accusatory to patients (e.g., nonadherence, smoking cessation).

Self-confidence ratings for three scenarios involving other pharmacists or student pharmacists ranged from 54.2 to 88.6 (items 7, 15, 18). Respondents rated their self-confidence in their ability to communicate a professionalism issue to a student pharmacist significantly higher as compared to confronting a pharmacist co-worker about abuse or presenting a journal article to a group of pharmacist colleagues.

3.5. Self-confidence analyses across demographic variables

Statistically significant differences in self-confidence ratings were noted across gender for 6 items. Females reported significantly higher mean ratings for items 1 and 5 and significantly lower ratings for items 14, 15, 16, and 17 (p -values < 0.015). Differences in self-perceived confidence were also noted across community pharmacy practice setting for 7 items (1, 2, 4, 7, 10, 15, 17) with pharmacists employed in supermarket/discount store settings reporting

lower mean ratings than chain and/or independent pharmacists in every instance (p -values < 0.05). Pharmacists in independently owned practice settings indicated increased confidence in their ability to counsel a new patient about the abuse potential associated with Oxycontin ($p = 0.006$) as compared to pharmacists in chain settings. Conversely, chain pharmacists reported increased confidence in their ability to talk with a group of senior citizens about blood pressure medications as compared to independent pharmacists ($p = 0.025$). Whereas no statistically significant differences were noted across state geographic region, two items (6, 12) differed across county rural designation. Lower self-confidence was noted for pharmacists in rural or partial rural counties as compared to non-rural counties. Both of the items presented scenarios that involved OPR-related prescriber communication. Statistically significant, but small positive and negative correlations were noted between SSCC items and pharmacists' years in practice, hours worked per week, and number of prescriptions filled per week. Items (1, 5, 10, 18) were negatively correlated with years in practice ($r = -0.221$ – -0.151 ; $p < 0.001$), whereas items 14 ($r = 0.179$; $p < 0.001$) and 15 ($r = 0.289$; $p < 0.001$) were positively correlated with years in practice. Items 5 and 10 had a statistically significant positive correlation with hours worked per week and the number of prescriptions filled per week ($r = 0.084$ – 0.108 ; $p < 0.037$).

4. Discussion

This study sought to compare community pharmacists' self-confidence in their ability to communicate in PDAA-related scenarios to their self-confidence in other scenarios. Although the community pharmacist's role in PDAA prevention has yet to be fully conceptualized, their efforts will likely involve engaging and communicating with patients and other healthcare professionals across different PDAA-related communication scenarios. Given that previous research has indicated that SPCC is positively correlated with willingness to communicate, an understanding of community pharmacists' confidence specific to PDAA communication tasks is warranted.¹⁹ To our knowledge, this is the first study to evaluate pharmacists' communication self-confidence across multiple contexts.

Some of the scenarios included in the survey instrument were identified as accusatory or questioning the actions of the receiver. In general, community pharmacists' communication confidence ratings for tasks that do not question the actions of others were higher as compared to tasks that do. Furthermore, this study found that community pharmacists report less self-confidence in their ability to communicate in scenarios that involve opioid pain reliever abuse or addiction, as compared to other scenarios. Whereas research is warranted to model the relationship between self-confidence beliefs and communication behaviors, theory suggests the low SSCC specific to PDAA topics identified in this study may lead to decreased willingness to communicate about PDAA topics, and PDAA communication avoidance. Recent studies report that, in some PDAA situations, pharmacists tell patients that a requested medication is not in stock.^{34,35} This could be a communication avoidance technique that allows a pharmacist to avoid engaging in a perceivably difficult conversation.

While community pharmacists in this study expressed relatively lower SSCC for most accusatory scenarios involving PDAA, there were some exceptions. In particular, pharmacists rated their confidence in refusing to fill an OPR prescription from a prescriber

who had written the prescription for him/herself almost as strongly as counseling a patient about their cholesterol medication. They also rated themselves as having a relatively high confidence in their ability to question a new patient about OPR dispensings at other pharmacies based on a controlled substance monitoring database report. These findings could be related to the verb word choice in the items. Refusing and questioning may be interpreted to involve less communication ability as compared to other actions (e.g., counsel, call, discuss). Interestingly, both of the aforementioned PDAA scenarios are less subjective in their assessment, lead to the pharmacist denying the prescription, and are unlikely to lead to the provision of interventional counseling or referral to treatment. These findings support Fleming et al.'s call for community pharmacists to move beyond denying controlled substance prescriptions to the provision of interventional counseling and referrals when appropriate.³⁶

Previous health professional research indicates that the subjective nature of detecting abuse and addiction can be paralyzing to pharmacists and prescribers alike when considering communication engagement.³⁵ More objective urine drug screens, prescription drug monitoring program (PDMP) inquiries, and the distance traveled to the pharmacy are just a few examples of the kind of information preferred by providers when deciding to engage in a PDAA conversation with a patient. The two dyadic scenarios in this study receiving the lowest SSCC scores required a community pharmacist to counsel an established patient about perceived OPR addiction and to confront a pharmacist co-worker about perceived OPR abuse. Both scenarios may come across as accusatory to the receiver and require the pharmacist to initiate communication without concrete evidence for doing so. Employing ubiquity statements or normalizing communication in situations such as these may assist pharmacists in engaging patients and others in PDAA conversations.³⁷

That pharmacists expressed less confidence when engaging in public speaking is consistent with previous pharmacy research.³⁸ These findings may be indicative of trait level communication apprehension that has been noted previously in pharmacy students.^{38,39} Likewise, differences have been noted in pharmacists' PDAA perceptions and beliefs across demographic characteristics in previous studies.^{34,36,40} Interestingly, the longer a community pharmacist had been practicing, the less confidence in several non-accusatory, knowledge based activities was expressed. This may be a result of pharmacists feeling less knowledgeable about medication information over time. Conversely, years in practice was positively associated with confidence to counsel an established patient about perceived OPR addictions and to confront a pharmacist colleague about OPR abuse. Pharmacists may gain confidence with increased communication experience and practice.⁴¹ Fleming et al. noted similar results among Texas community pharmacists.³⁶

4.1. Limitations

To our knowledge, this is the first study to examine community pharmacists' communication self-confidence beliefs at the state, or situational, level. Strengths of the study include the authenticity of the scenarios evaluated, the large number of pharmacists who participated in the study, and the novel, yet informed by previous communication literature, approach to examining self-confidence beliefs among a cohort of health professionals well positioned to

engage patients in PDAA conversations. Limitations of the study include the self-report methodology employed, potential nonresponse bias and social desirability, and the lack of previous survey instrument reliability and validity testing. Generalizability to community pharmacists in Tennessee and in general is limited given the non-random sampling design employed.

5. Conclusion

Community pharmacists are relatively less confident in their ability to communicate with patients and other healthcare professionals about prescription drug abuse and addiction. This finding suggests community pharmacists' lower self-confidence beliefs may contribute to communication avoidance behaviors previously described in the literature. Differences in self-confidence ratings were noted across pharmacists' personal and practice setting characteristics. Research is warranted to better understand the relationship between self-confidence and observed PDAA communication behaviors. Likewise, research is warranted to develop and test interventions that optimize self-confidence in PDAA situations.

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PDAA: prescription drug abuse/addiction

Fig. 1.
Item means and 95% confidence intervals (N = 636).

Table 1

Community pharmacist demographic and practice setting characteristics (N = 636).

Variable	Numeric Value ^a
Gender, No. (%)	
Female	275 (43.2)
Male	361 (56.8)
Setting, No. (%)	
Chain	303(49.1)
Independent	211 (34.2)
Supermarket/Discount store	103(16.7)
Tennessee region, No. (%)	
West	121 (20.0)
West Central	185 (30.6)
East Central	110 (17.3)
East	189 (29.7)
County description, No. (%)	
Rural	226 (37.4)
Partial rural	97 (16.0)
Non-rural	282 (46.6)
Years in practice, Mean (SD)	25.7 (14.1)
Hours worked per week, Mean (SD)	36.3 (10.8)
Prescriptions filled per week at practice site, Mean (SD)	1639.8 (975.0)

^aTotals do not always add to 636 due to missing data.

Table 2

Item means, standard deviations, and ranges (N = 636).

Item	Mean	SD	Minimum	Maximum	Audience	Questions actions of receiver?	PDA context?	Receiver
1. Counsel a new patient about a cholesterol medication	92.64	12.34	0	100	Dyadic	N	N	P
2. Refuse to fill an OPR prescription from a prescriber who has written the prescription for him/herself	91.17	18.61	0	100	Dyadic	Y	Y	HP
3. Counsel a new patient about considering smoking cessation	90.36	13.93	0	100	Dyadic	Y	N	P
4. Counsel an established patient about perceived antidepressant medication non-adherence	89.74	13.25	0	100	Dyadic	Y	N	P
5. Counsel an established patient about a new diabetes medication	89.01	15.07	0	100	Dyadic	N	N	P
6. Call a prescriber with whom you have a relationship to discuss a mutual patient's potential OPR diversion concerns	88.57	17.06	0	100	Dyadic	N	Y	HP
7. Discuss perceived unprofessionalism with a student pharmacist	88.57	17.64	0	100	Dyadic	Y	N	HP
8. Question a new patient about opioid pain reliever dispensings at other pharmacies based on a controlled substance monitoring database report	88.32	18.27	5	100	Dyadic	Y	Y	P
9. Counsel a new patient about abuse potential associated with an Oxycontin™ prescription	86.96	18.13	0	100	Dyadic	N	Y	P
10. Talk with a group of 25 senior citizens about blood pressure medications	82.55	23.38	0	100	Group	N	N	O
11. Question a prescriber with whom you have an established relationship regarding the legitimacy of an OPR prescription	82.29	22.67	0	100	Dyadic	Y	Y	HP
12. Call a prescriber with whom you have no relationship to report a perceived patient-related drug addiction issue	82.08	22.45	0	100	Dyadic	N	Y	HP
13. Question a prescriber with whom you have no relationship regarding the legitimacy of an OPR prescription	80.82	24.72	0	100	Dyadic	Y	Y	HP
14. Counsel an established patient about perceived OPR addiction	77.40	22.09	0	100	Dyadic	Y	Y	P
15. Confront a pharmacist co-worker about perceived OPR abuse	70.80	28.37	0	100	Dyadic	Y	Y	HP
16. Make a presentation to 10 local police officers about OPR abuse	65.57	29.71	0	100	Group	N	Y	o
17. Present OPR information at a Narcotics Anonymous meeting	61.74	31.96	0	100	Group	N	Y	o
18. Present a journal article critique to a group of pharmacist colleagues	54.20	32.56	0	100	Group	N	N	HP

OPR=Opioid Pain Reliever; HP=Health professional; O=Other; P=Patient.