

Brief Communication

The Effect of Demographic and Social Factors on the Decision-Making of Community Pharmacists in Ethical Dilemmas

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INTRODUCTION

Community pharmacists are confronted with ethical dilemmas and concerns in their everyday practice. Dealing with such ethical issues is questioning the proficiencies of the pharmacists. Many studies have been reported on pharmacy ethics.^[1-4] In the context of community pharmacists, very few studies have been reported so far regarding the ethical dilemmas faced by community pharmacists. Ethical dilemmas arose in their day-to-day work when their ethical principles are challenged by patients' behavior and other health professionals.^[5] Community pharmacists compromise on their values and ethical issues not only because of patient's or physician's request but also because of their employers' intrusion.^[6] "Community pharmacists' understanding of ethics, confidentiality, patient autonomy, trustworthiness, and reliability may be the dynamics that affect community pharmacists' values which may influence their decision-making during ethical dilemmas."^[7] All these studies reported on gatekeeping processes, ethical constructs, and passivity by community pharmacists. A study reported that "age"

ABSTRACT **Objective:** The objective of the study is to investigate the effect of demographic and social factors on the decision-making of community pharmacists when confronted with ethical dilemmas during their professional practice. **Methods:** This was a questionnaire-based, cross-sectional study. A total of 1057 community pharmacists were approached. The final participants were 742. Independent-sample *t*-test and one-way analysis of variance were used to analyze the factors (age, gender, work experience, education qualification, number of pharmacists per pharmacy, and pharmacy location). **Findings:** Older pharmacists, experienced pharmacists, and urban pharmacists have less ethical dilemma compared to the younger pharmacists, less work experience pharmacists, and rural pharmacists, respectively. **Conclusion:** Individual factors such as age, gender, work experience, and educational level and organizational factors such as the number of pharmacists in a pharmacy and location of pharmacy may influence the ethical dilemma of community pharmacists.

KEYWORDS: *Community pharmacist, decision-making, ethical scenario*

and "work experience" may impact ethical dilemma.^[8] Thus, two essential research gaps were identified from the previous studies. One is the individual factors which affected ethical dilemmas among community pharmacists and the other is the organizational factors which impacted the ethical dilemma among community pharmacists. Considering these factors that may have impacted the ethical dilemma during ethical decision-making process, in this study, a theoretical framework [Figure 1] was constructed using individual variables such as age, gender, work experience, and education qualification and organizational variables such as number of pharmacists per pharmacy and pharmacy location that were tested against the dependent variable (ethical dilemma). This study aimed to find out if the factors mentioned above affect the decision-making of community pharmacists when confronted with ethical dilemmas during their professional practice.

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METHODS

This study received ethical clearance from the Institutional Ethics Committee, Coimbatore, India (ECR/233/Inst/TN/2013).

A cross-sectional study was conducted in Tirunelveli district, Tamil Nadu, using a validated self-administered questionnaire from March 2016 to December 2017. In Tirunelveli district, approximately 1832 community pharmacists existed. The minimum sample size was needed to generalize the study results. Hence, using a Raosoft software online calculator,^[9] a required sample size of 318 was confirmed. The power was 80% with a distribution of response 50% carrying a 95% confidence interval and a 5% margin of error. A total of 1057 community pharmacists were approached using probability sampling methods. The final participating number was 742, which was more than the required sample size to generalize the findings. The participants were selected using a cluster sampling method.

Questionnaire items were constructed by conducting an extensive literature review.^[5-8] The questionnaire was constructed in English as healthcare professionals have English proficiency. The questionnaire consisted of two sections. Section 1 collected the demographic profile of the participants. Section 2 had 16 scenarios which evaluated the participants' ethical dilemma and decision-making. For each scenario in the questionnaire, the participants have to decide how easy or difficult that scenario is for them to decide on it. A scoring of 1 = very easy, 2 = easy, 3 = neutral, 4 = difficult, and 5 = very difficult was given for each item in the questionnaire.^[8]

The questionnaire used in this study was validated by translational or representational validity using a panel of three experts to exploit how well the idea of a theoretical

construct is represented in the questionnaire.^[10] Two subtypes of this validity method, namely face validity and content validity, were done.^[11] Literature confirms that face validity is a component of content validity.^[12,13] Face validity is established when researchers have experts on the research subject reviewing the questionnaire who can conclude that the questionnaire measures the characteristic or trait of interest.^[13] Face validity involved the experts who considered the items in the questionnaire and agreed that the test is a valid measure of the concept which is being measured. This is one of the widely used methods of validity in developing countries.^[14] Content validity pertained to the degree to which the questionnaire fully assessed or measured the construct of interest.^[15] The valid content questionnaire is typically achieved by a rational analysis of the questionnaire by the raters (experts) familiar with the construct of interest.^[16] The raters reviewed all of the questionnaire items for readability, clarity, and comprehensiveness and came to a level of agreement as to which items should be included in the final questionnaire.^[17] The rating was dichotomous where the raters indicated whether an item is "favorable" (which is assigned a score of 1) or "unfavorable" (which is assigned score of 0). The item-rated content validity indices (CVIs) of ≥ 0.78 were considered as a significant level for the inclusion of an item into the study.^[18] Reliability was done using Cronbach's alpha internal consistency. The content of the questionnaire was piloted on 50 respondents. Results of the pilot study were not included in the study data. Reliability Cronbach's alpha of the questionnaire was 0.74.

The total mean score values were taken for Section 2 of the questionnaire. Kolmogorov–Smirnov test was used to verify the normality of the data. Independent-sample *t*-test and one-way analysis of variance were used to

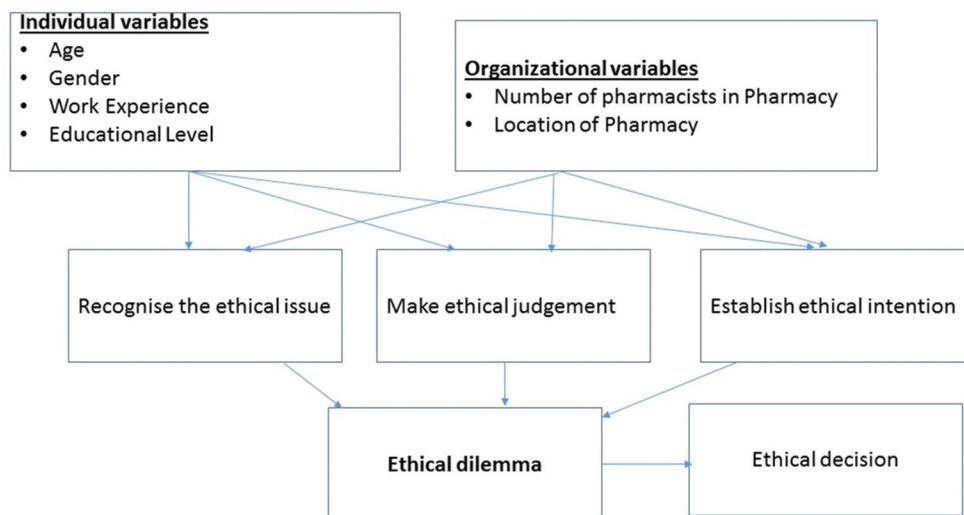


Figure 1: Theoretical framework

analyze the factors (age, gender, work experience, education qualification, number of pharmacists per pharmacy, and pharmacy location). Levene's test was used to analyze the homogeneity of variances. *Post hoc* tests were used to find where the differences occurred. Cohen's *d* test used to study the effect size.

RESULTS

There was a significant difference in the ethical dilemma of community pharmacists based on their age $F(3,738) = 4.56, P = 0.04$. However, the actual difference in the mean scores between groups may vary depending upon the different ethical dilemmas. The Cohen *d* value was 0.54 which signified a "medium" effect size. There was a significant difference in the ethical dilemma of community pharmacists based on their work experience $F(3,739) = 3.83, P = 0.03$. The Cohen *d* value was 0.82 which signified a "large" effect size. There was a significant difference in the ethical dilemma of community pharmacists based on their gender $t(1,740) = 2.73, P = 0.02$. The Cohen *d* value was 0.22 which signified a "small" effect size. There was a significant difference in the ethical dilemma of community pharmacists based on their education qualification $t(1,740) = 1.35, P = 0.03$. The Cohen *d* value was 0.18. There was a significant difference in the ethical dilemma of community pharmacists based on the number of pharmacists in a pharmacy $F(2,739) = 3.63, P = 0.05$. The Cohen *d* value was 0.20 which signified a "small" effect size. There is a significant difference in the ethical dilemma of community pharmacists based on the location of the pharmacy $F(2,739) = 2.72, P = 0.04$. The Cohen *d* value was 0.16 indicated the differences are trivial, though statistically significant.

DISCUSSION

Age has impacted the ethical dilemma of community pharmacists. Younger pharmacists are ethically concerned about the patients' health and safety compared to the older ones who tend to dispense without any hesitation. Younger pharmacists are ethically concerned about the patients' confidentiality compared to the older ones. Work experience has impacted the ethical dilemma of community pharmacists. The community pharmacists with more experience at work could handle the ethical scenarios without any dilemma better than the pharmacists with less than 5 years of experience at work. Glover *et al.* in 2014 contended that depending on the level of experience, individuals' awareness of ethical aspects is high.^[19] This may be because personal values increase by the experiences gained in any work environment, which in turn influence in their ethical decision-making.^[20] Gender has impacted the ethical

dilemma of community pharmacists. Male and female may have the same view toward ethical dilemmas, but the decision is made in dissimilar ways.^[21] A study clarified that peoples often adopt organizational expectations while making ethical decisions.^[22] Men seem to be task oriented while women seem to be relation-oriented characteristics, and hence, gender is a significant factor in ethical decision-making.^[23] Educational qualification has impacted the ethical dilemma of community pharmacists. However, the magnitude of the difference is trivial. Some studies have reported that there is no association between the two.^[24,25] To disagree with this argument, a study by Doyle and Oflaherty stated that education influences an individual's ethical reasoning.^[26] Researchers suggested that educational level had impacted the ethical decision-making process.^[27,28] In Indian pharmacy curriculum, ethics and pharmaceutical jurisprudence (law) have been taught didactically as a subject for both diploma and bachelor degree courses. Although didactic lectures are necessary, it is high time to have different learning styles such as simulated learning with ethical scenarios and interprofessional learning integrated with problem-based learning, which may enhance the values, ethics, and decision-making of the future pharmacists. The number of community pharmacists in a pharmacy has impacted the ethical dilemma of community pharmacists. When there is more than one pharmacist available in a pharmacy, the ethical dilemma among the pharmacists is decreased. Depending upon the size of the community pharmacy and the number of pharmacists' works in the pharmacy, the ethical decision-making varied. This finding is supported by other studies as well.^[29,30] Differences existed in the work environment depending on large or small organizations. It is reasoned that big organizations would have commercial benefits than small organizations; consequently, small organizations may be pressurized to take unethical decisions. In this study, the location of a pharmacy has impacted the ethical dilemma of community pharmacists. Rural community pharmacists have more ethical dilemma compared to the urban community pharmacists. It is difficult for the pharmacists working in private community pharmacy. A study revealed that geographic isolation could increase ethical dilemmas unfamiliar to the urban or suburban health professionals due to lack of resources, funding, and cultural differences.^[31]

This study has certain limitations. For example, it is difficult to check the misinterpretations and unintelligible replies by the respondents. Furthermore, the respondents have limited options of responses, based on the selection made by the researcher.

In this study, individual factors such as age, gender, work experience, and educational level and

organizational factors such as some pharmacists in a pharmacy and location of pharmacy have impacted the ethical dilemma of community pharmacists. Older pharmacists, experienced pharmacists, and urban pharmacists have less ethical dilemma compared to the younger pharmacists, less work experience pharmacists, and rural pharmacists, respectively. However, when each ethical scenario-based assessment was made, there was a mixture of results. Hence, it is evident that ethical dilemma and decision-making are based on ethical scenarios faced by the community pharmacists.

AUTHORS' CONTRIBUTION

Kingston Rajiah and Rajesh Venaktaraman contributed in the providing the concept and design of the study, acquisition of data, analysis, and interpretation of data, drafted/revised the manuscript, and approved the final version of it before submission.

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Conflicts of interest

There are no conflicts of interest.

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