Ethical Sensitivity among Thai Pharmacy Students*

ความไวทางจริยธรรมวิชาชีพของนักศึกษาเภสัชศาสตร์

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Abstract

This study aims to assess the ethical sensitivity level among pharmacy students and to find out the factors influencing ethical sensitivity. Survey research, a cross-sectional analytic study was conducted during September-November 2016. The data were collected using a case study-assisted self-administered questionnaire. Samples of 253 participants were selected using a convenience sampling method. Descriptive statistics (number, percentage, average and standard deviation) was used for a part of ethical sensitivity score. Multiple linear regression was performed to find the factor affecting ethical sensitivity. The average score of students' ethical sensitivity was 4.52 $\pm$ 1.54 (of 8 points) which was at a moderate level. The factors affecting ethical sensitivity were cumulative grade point average, attitude to general ethics and living status by r^2 = 0.09. This finding suggests that the institute should improve students' ethical sensitivity to avoid the ethical issue. Most teaching ethics in the curriculum should more focus on ethical sensitivity toward ethical issues especially in issues that the majority of students cannot identify them. In addition, the institute should cultivate students' attitude to general ethics because this was the most influencing factor toward students' ethical sensitivity.

Keywords: Ethical sensitivity; Ethics; Pharmacy students

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บทคัดย่อ

การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อประเมินความไวทางจริยธรรมวิชาชีพ ในนักศึกษาเภสัชศาสตร์ และ เพื่อหาปัจจัยที่มีอิทธิพลต่อความไวทางจริยธรรมวิชาชีพ การศึกษานี้เป็นการศึกษาเชิงพรรณนาแบบตัดขวาง เก็บข้อมูลในช่วงเดือนกันยายน – พฤศจิกายน 2559 โดยใช้แบบสอบถามพร้อมกรณีศึกษาเป็นเครื่องมือ มีผู้เข้าร่วม 253 คน จากการสุ่มตัวอย่างแบบตามความสะดวก ใช้สถิติเชิงพรรณนา (จำนวน ร้อยละ ค่าเฉลี่ย และ ส่วนเบี่ยงเบนมาตรฐาน) สำหรับข้อมูลส่วนที่เป็นคะแนนความไวทางจริยธรรมวิชาชีพ และใช้การวิเคราะห์การถดถอยเชิงเส้นพหุคูณ สำหรับการหาปัจจัยที่มีอิทธิพลต่อความไวทางจริยธรรมวิชาชีพ ผลการศึกษาพบว่า ความไวทางจริยธรรมวิชาชีพของนักศึกษา มีค่าคะแนน 4.52 $\pm$ 1.54 จากคะแนนเต็ม 8 คะแนน ซึ่งอยู่ในระดับปานกลาง และปัจจัยที่มีอิทธิพลต่อความไวทางจริยธรรมวิชาชีพ ได้แก่ เกรดเฉลี่ยสะสม ทัศนคติทางจริยธรรมทั่วไป และ สถานภาพการพักอาศัยอยู่กับครอบครัว โดยมีค่า r^2 = 0.09 ดังนั้น สถาบันการศึกษาจึงควรส่งเสริมและพัฒนาด้านความไวทางจริยธรรมวิชาชีพของนักศึกษา เพื่อลดการกระทำผิดจริยธรรมวิชาชีพจากการไม่รู้หรือไม่เจตนา โดยเฉพาะในรายวิชาในหลักสูตรที่เกี่ยวข้องกับจริยธรรมวิชาชีพควรมีเพิ่มจุดเน้นเกี่ยวกับความไวทางจริยธรรมวิชาชีพ และเน้นย้ำในประเด็นที่นักศึกษามักมองข้าม อีกทั้งควรเน้นเรื่องการบ่มเพาะทัศนคติที่ดีต่อจริยธรรมทั่วไปให้แก่นักศึกษา เพราะพบว่าเป็นปัจจัยที่มีอิทธิพลอย่างมากต่อความไวทางจริยธรรมวิชาชีพ

คำสำคัญ: ความไวทางจริยธรรม จริยธรรม นักศึกษาเภสัชศาสตร์

Introduction

There are ethical cases on pharmacy practice occur periodically in Thailand (Phanthumetamat & Wongruttanachai, 2013; Sriviriyanupap & Sutapuk, 2018). Partly because pharmacists face many ethical challenges in their daily work (Benson, Cribb, & Barber, 2009; Chaar, Brien, & Krass, 2005; Crnjanski, Krajnovic, Stojkov-Rudinski, & Tadic, 2012; Deans, 2010; Kalvemark, Hoglund, Hansson, Westerholm, & Arnetz, 2004; Kalvemark Sporrong, 2007; Noordin, 2012; Sharif, Javadi, & Asghari, 2011). Though there are professional ethics as a guideline for professional practice. But, some situations are hard to understand or make a good decision, consequently bring about unethical behaviors periodically. Anyway, there is a fundamental ethical skill in terms of ethical sensitivity. Ethical sensitivity is the first component in ethical decision making process (Weaver, 2007) by it is a personal predisposition guiding ethical decision making (Jones, 1991; Lutzen, Dahlqvist, Eriksson, & Norberg, 2006). Therefore, ethical sensitivity plays an important role because people may have strong ethical judgment skills but will not begin to use them if they fail to recognize an ethical issue or lack of ethical sensitivity (Lincoln & Holmes, 2011). Poor in ethical sensitivity may lead to unethical behaviors and cause a negative effect to the related person and workplace. Accordingly, studying in

ethical sensitivity is essential in pharmacy professional but there is a small amount of research in Thailand.

Currently, health care services are patient-centered care (Sitthiboot, Anuratpanich, & Sooksriwong, 2017). The ethical principle is an important part to drive patient-centered care. So, the ethical development of students is an important issue. Educational management must emphasize the importance of both ethical knowledge and learning process by integration as appropriate (Suksodkiew, 2018). Likewise, besides teaching pharmacy students with knowledge and skills in the pharmacy practice, the institute also has a duty to enhance the ethics of the pharmacy profession in order to produce the pharmacists who have not only professional knowledge but also professional ethics.

Many studies found that ethical sensitivity can be developed by education (Baykara, Demir, & Yaman, 2014; Bebeau, 2014; Comrie, 2012; Coyne, Massey, & Thibodeau, 2005; Indhraratana, 2014; Park, Kjervik, Crandell, & Oermann, 2012; Weaver, Morse, & Mitcham, 2008). Therefore the Institute plays an important role in this part, prepare the students to deal with ethical problems when they become pharmacists is necessary. The study will bring about to understand the current situation of the ethical sensitivity which the important information for the institute and those who involve in this area.

The study in ethical sensitivity is necessary for all professional as well as the pharmacy profession. However, little is known regarding pharmacy students' ethical sensitivity in Thailand by a few studies in pharmacy professional's ethical sensitivity are found (Lerkiatbundit, 2010a, 2010b). Therefore, in order to know the effects of the current teaching method, it would be assessed. Anyway, there is a controversy about factors influencing ethical sensitivity, whether demographic characteristics influence ethical sensitivity. Moreover, most previous studies have been performed in Western and other Asian countries and most of the participants are nurses or nursing students. In addition, the content of the instrument of these studies is specific for nurses' practice and hard to generally to others professional. For these reasons, there is a need for research to explore ethical sensitivity and the possible factors that may influence moral sensitivity among pharmacy students, which lead to more understanding of this issue. This study conducts with the aims to measure the fundamental ethic skill in terms of ethical sensitivity and find out the factors influencing ethical sensitivity. This might be helpful to the instructors and those involved to evaluate for improving the success of ethical teachings and also used to monitor the various measures in the ethical.

Materials and methods

Study design and Sample

The study was approved by the Faculty of Dentistry and Faculty of Pharmacy, Mahidol University Institutional Review Board by March 17, 2016 (the number is MU-DT/PY-IRB 2016/017.1603) before starting the study. Cross-sectional analytic survey research was conducted on 253 undergraduate pharmacy students, the academic year 2016 at Mahidol University. A sample size of a population of 731 students was estimated using Krejcie and Morgan table (1970), the sample size was 253. All undergraduate pharmacy students were invited to join the study and a total of the participant was 253.

Research instrument

A case study-assisted self-administered questionnaire was using as a research instrument. The questionnaire consisted of 2 parts.

1.) The first part was a participant's demographic characteristics which include general information and ethical education experience. By the ethical education experience in this study was attending the course of Pharmacy Laws and Ethics (PYAI 402).

2.) The second part consisted of two assessments as follows:

2.1) Ethical sensitivity assessment

This assessment consisted of 3 case studies regarding the performance of pharmacist at a pharmacy, a hospital, and a pharmaceutical factory. The participant was assigned to read the case studies, by there were 8 ethical issues hidden in the case studies (2 or 3 ethical issues per case study). After finish reading each case study, the students were asked to identify the issue that was illegal or unethical by focus on pharmacist's performance. The ethical sensitivity was ranked in 5 levels by the number of ethical issues which were identified by the respondents. The value of each identified issue was equal to 1 point of the ethical sensitivity score. The average score was ranked in 5 levels as very low (0.00-1.60 points), low (1.61–3.20 points), moderate (3.21–4.80 points), high (4.81–6.40 points), and very high (6.41–8.00 points). Anyway, case studies in this part were allowed to apply from a previous study by Lerkiatbundit (Lerkiatbundit, 2010b).

2.2) Attitude toward general ethics assessment

There were 10 question items of statements which composed of 3 parts as positive statements (3 items), negative statements (5 items) and ethical simulation events (2 items). The agreement levels were transformed into an attitude score as 1–5 points by the score was considered as an interval scale.

Data collection

The data collection time was set at the end of the class schedule at nearly the end of the first semester (September - November 2016). An appointment for the participant in each class year was a different time depending on their convenient time. After the participant completed the questionnaire, they sent it back to researchers immediately with an agreement not to tell the contents of the questionnaire to the participants in another class year.

Data Analysis

The questionnaires were verified for completeness, after that the data were entering into the computer. The data analysis tool was a Statistical Package for the Social Sciences (SPSS) version 16 by the significant p-value in this study was 0.05. Descriptive statistics were utilized to describe demographic information. ANOVA and independent sample t-test were applied to analyze the difference in ethical sensitivity score among class years. In addition, multiple linear regression was applied to find out factors influencing ethical sensitivity.

Results

Demographic data of the participant

Table 1 presented demographic data in number and percent. The majority of the participant was female (68.77%). Most participants were in the age group 21 – 23 years old. The minority of participant (10.67%) was 1st-year students who have no cumulative grade point average (CGPA) because the time of data collection was before the end of the first semester. The majority of respondents (76.19%) lived with their families. the ethical educational experience is students' attending the course of Pharmacy Laws and Ethics (PYAI 402) in the 4th year of a study program. The results showed that most of the participant has no ethical educational experience yet (68.38%). For the participants who have experience in ethical education, most of them (86.15%) got grade 3.00 and over.

Table 1 Number and percentage of respondents by demographic data

Variable	Number (%)
Gender	
Male	79 (31.23)
Female	174 (68.77)
Age (years)	
18-20	99 (39.13)
21-23	124 (49.01)
24-26	30 (11.86)
Class year	
1st year	27 (10.67)
2nd year	46 (18.18)
3rd year	49 (19.37)
4th year	51 (20.16)
5th year	41 (16.21)
6th year	39 (15.42)
CGPA (of 4.00)	
No (have no CGPA yet)	27 (10.98)
Yes	226 (89.33)
CGPA (of 4.00)	
Lower than 3.00	127 (57.99)
3.00 and over	92 (42.01)
Living status	
Living with family	192 (76.19)
Not living with family	60 (23.81)
Ethical education experience (attending Pharmacy Laws and Ethics course)	
No	173 (68.38)
Yes	80 (31.62)
Grade of Pharmacy Laws and Ethics course (of 4.00)	
Lower than 3.00	9 (13.85)
3.00 and over	56 (86.15)

Due to missing values, not all return case is valid. The column of percentage (%) reports the percentage of valid cases.

The participant's attitudes toward general ethics

Table 2 presented an average score of attitude to general ethics. The average score of general ethics was 3.99 ± 0.52 (of 5 points). It was found that highest average score was 4.72 ± 0.56 points for "the ethics is needed" and the lowest average score was 3.51 ± 0.80 points for "the coping to solve the unethical situation".

Table 2 Average score of attitude toward general ethics

Type of question item	Variable	Average score of attitude toward general ethics
Positive statement	1. The ethics is needed.	**4.72 ± 0.56**
	2. Honesty is the best policy.	4.30 ± 0.99
	3. Goodness is important than other	4.08 ± 0.91
Negative statement	4. Lying to survive ought to be done.	3.82** ± 1.00
	5. The result is more important than the process	4.06** ± 0.97
	6. The corruption will be permitted if bring the most benefit to society.	4.05** ± 1.01
	7. It common to ignoring to see other people being exploited, do not pandering.	3.88** ± 0.87
	8. To do as most people, even if it is a wrong thing because do not want to be a black sheep.	3.88** ± 0.90
Simulated situations	9. The feeling when confronting the bad deeds or unethical situation.	3.60 ± 0.78
	10. The coping to solve the unethical situation.	*3.51 ± 0.80*
	Average score	3.99 ± 0.52

** The scores in negative statements (variable 4-8) were inversed score

Bold is the maximum value and italic is the minimum value.

The participant's ethical sensitivity

Table 3 presented the number and percentage of participants who can identify each ethical issue and the average score of ethical sensitivity. The highest number of participant who could identify the ethical issue was 241 participants (95.26%) who could identify "cooperating in illegal drug manufacturing". For the least identified ethical issue was "concealing or ignoring to tell the adverse drug information", by only 36 students (14.23%) could identify this issue. There were 2 issues that have statistically different ($p < 0.05$) between

class years including “advertising of one own pharmacy” and “ignoring to solve the maltreatment”. In addition, the results showed that the 5th and 6th year students more likely to identify "advertising of one own pharmacy” than others year, while only the 5th year student more likely to identified “ignoring to solve the maltreatment". It was determined that the averages score of ethical sensitivity of all class year was 4.52 (of 8 points) which ranked at a moderate level. Anyway, there was not statistically different in the average score of ethical sensitivity among class years ($p > 0.05$).

Table 3 Number and percentage of participants who can identify each ethical issue and the average score of ethical sensitivity

Class year	Total (n=253)	1st (n=27)	2nd (n=46)	3rd (n=49)	4th (n=51)	5th (n=41)	6th (n=39)	p-value
Ethical issue	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	
1. Allowing others to perform pharmacist’s role	142 (56.13)	19 (70.37)	26 (56.52)	27 (55.10)	22 (43.14)	28 (68.29)	20 (51.28)	0.13[a]
2. Concealing or ignoring to tell the adverse drug information	*36 (14.23)*	3 (11.11)	4 (8.70)	7 (14.29)	12 (23.53)	8 (19.51)	2 (5.13)	0.13[a]
3. Disclosing of patient's confidential information without consent	217 (85.77)	19 (70.37)	42 (91.30)	45 (91.84)	42 (82.35)	35 (85.37)	34 (87.18)	0.13[a]
4. Advertising of one own pharmacy	137 (54.15)	7 (25.93)	20 (43.48)	25 (51.02)	18 (35.29)	32 (78.05)	35 (89.74)	<0.01[a]*
5. Supporting of non-identity medical usage	135 (53.36)	13 (48.15)	27 (58.70)	28 (57.14)	30 (58.82)	19 (46.34)	18 (46.15)	0.65[a]
6. Ignoring to solve the maltreatment	124 (49.01)	14 (51.85)	17 (36.96)	26 (53.06)	28 (54.90)	28 (68.29)	11 (28.21)	<0.01*[a]
7. Practice without a license	111 (43.87)	8 (29.63)	22 (47.83)	23 (46.94)	23 (45.10)	20 (48.78)	15 (38.46)	0.61[a]
8. Cooperating in illegal drug manufacturing	**241 (95.26)**	26 (96.30)	43 (93.48)	45 (91.84)	50 (98.04)	38 (92.68)	39 (100.00)	0.41[a]
Average score of	4.52	4.04	4.37	4.61	4.41	5.07	4.46	0.11[b]

Class year	Total (n=253)	1st (n=27)	2nd (n=46)	3rd (n=49)	4th (n=51)	5th (n=41)	6th (n=39)	p-value
Ethical issue	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	
ethical sensitivity (level)	± 1.54 (moderate)	± 1.60 (moderate)	± 1.32) (moderate)	± 1.63 (moderate)	± 1.78 (moderate)	± 1.35 (moderate)	± 1.35 (moderate)	

[a] = chi-square test, [b] = ANOVA

* Significant difference at $p < 0.05$

Bold is the maximum value and italic is the minimum value.

Factors influencing ethical sensitivity

In order to determine factors influencing the respondents' ethical sensitivity, Multiple Regression Analysis was performed. The variables were put to the analysis including 1) gender, 2) age, 3) class years, 4) CGPA, 5) living status, 6) attended in Pharmacy Laws and Ethics course, 7) grade of Pharmacy Laws and Ethics course, and 8) attitude to general ethics Finally, only 3 variables were able to be a predictor consisting attitude to general ethics, CGPA and living status.

Table 4 presented the predictors that have an influence on the ethical sensitivity of pharmacy students, Mahidol University. The t-value of all 3 predictors was statistically significant ($p < 0.05$), so it could be used in a prediction. The coefficient of determination (r^2) was 0.090; this meant a linear model could predict 9.0% of the ethical sensitivity. The highest standardized regression coefficient (Bata) was 0.223 from attitude to general ethics; this was the most influencing factor.

Table 4 Factors affecting the total respondents' ethical sensitivity

Predictors	B	Std. Error	Beta	t-value	p-value
Attitude to general ethics	0.070	0.021	0.223	3.401	0.001*
CGPA	0.370	0.101	0.195	3.033	0.003*
Living status	- 0.490	0.237	- 0.135	- 2.069	0.040*
r	0.301				
r^2	0.090				
Constant	1.331				

* Significant difference at $p < 0.05$

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The model of regression equation from Table 4 can be developed to predict the participant's ethical sensitivity as formula:

$$Y = 1.331 + 0.070\ X_1 + 0.370X_2 - 0.490X_3$$

Where

Y = Ethical sensitivity, X_1 = Attitude to general ethics score, X_2 = GCPA, and X_3 = Living status

Discussion

This study has 3 parts to be discussed. First is the participant's ethical sensitivity, the second part is factors influencing ethical sensitivity and the last part is a limitation of the study as follows:

The participant's ethical sensitivity

In this study, the ethical sensitivity of pharmacy students in identifying each ethical issue was discussed by an operational definition of ethical sensitivity in this study was an ability to recognize ethical issues. According to the results (Table 3), it was determined that the ethical sensitivity was at a moderate level (4.52 ± 1.54) by the average score of ethical sensitivity were not statistically different among class year ($p > 0.05$). It meant class year was not related to the ethical sensitivity which it was consistent with the result in the part of factors influencing ethical sensitivity that found class year was not a factor influencing ethical sensitivity. This reflected that study in pharmacy curriculum was not influence students ethical sensitivity. In addition, the current teaching ethics in the curriculum might not adequate to enhance students' ethical sensitivity. This was consistent with a previous study (Huang, Yang, Zhang, Khoshnood, & Zhang, 2016) which studied in Chinese nurses and found that barriers to ethical sensitivity including the lack of knowledge related to ethics. In addition, many studies found that the ethical sensitivity significantly improves after the ethical education (Ertuğ, Aktaş, Faydali, & Yalçin, 2014; Hébert, Meslin, & Dunn, 1992; Nejadsarvari et al., 2015; Yeom, Ahn, & Kim, 2017). So, to avoid ethical problems should consider the topic of ethical sensitivity as a basic skill of pharmacy students. Ethical issues and case studies might be incorporated into subjects that involve teaching ethics in the curriculum to help students to understand the ethical problem in real practice.

Factors influencing ethical sensitivity

This study identified factors influencing the students' ethical sensitivity. It provided the information to promote and enhance the ethical sensitivity of the pharmacy students. This finding indicated that attitude to general ethics, CGPA and living status were the factors influencing ethical sensitivity of pharmacy students. Considering each factor, the details of the discussion were presented as follows:

1) Attitude to general ethics was a positive influence on the ethical sensitivity. The average score of ethical sensitivity were increased together with the attitude toward general ethics score. This result was consistent to a previous study, which studied in ethical sensitivity to racial and gender intolerance in graduate students and also found that the ethical sensitivity was related to attitudes toward racial and gender equity issues (Sirin, Brabeck, Satiani, & Rogers-Serin, 2003). In addition, the analysis indicated that the attitude to general ethics was the most influencing factor. So, the institute should promote students' attitude to general ethics by incorporated into teaching ethics or any course in the curriculum.

2) Cumulative Grade Point Average (CGPA) was a positive influence on ethical sensitivity. This might be explained that the participant who had a high CGPA level were also had a good reading skill (Cook, 2006) and good at reading the case studies. So, the respondents who had a high CGPA level might also have more ability to finding the ethical issues in the case study than the respondents who had a low CGPA level. This was a contrast with a study of Hebert, P. (1992) which found that there was no relation between ethical sensitivity and CGPA.

3) Living status, the status "living with family" was a negative influence on ethical sensitivity. This indicated that the status "living with family" did not help the respondents to increase in the ethical sensitivity; moreover, it decreases the ethical sensitivity. This might be because ethical development is a complex process and involves students experience in term of the growth environment. The ethical sensitivity might be depended on the characteristics or the family's values. According to a study of Cowell and Decety (2015), the ethical cognition was started in infant and toddler and it was fundamental to provide the early change and also a fundamental for forwarding movement. Sometimes the family's values do not align with the professional values or professional ethics (Nora, Schaefer, Álvarez, & Ramos, 2016), causing ethical adverse consequences. Anyway, it might be because the students who live with their families were got more security and more being attentive than the students who not live with their families. These might let them lack of awareness and lack of sensitivity to any situation.

Limitation of the study.

The data collection was started at 2 weeks before the first-semester final examination that made the students quite busy and had no more available time. Therefore, they offer to spend the time before the lunch break for the assessment. This might disturb the students' concentration especially in the short movie method which takes more time and made the students not intend to answer the questions as much as it should be.

Conclusions

In this study, it was determined that the ethical sensitivity among pharmacy students was a moderate level. The students' sensitivity should be improved by the faculty and those involved before they graduate. The factors influencing ethical sensitivity were the attitude to general ethics, CGPA and living status. However, these demographic factors influence the ethical sensitivity only 9%. It because this ethical competence has various factors involved which more complex and hard to measure. In order to apply this result to apply for teaching ethics in a pharmacy curriculum, the ethical issues were used for illustrating the ethical events in the pharmaceutical practice. In addition, cultivating ethical attitudes for students is an important thing. It should be promoted by incorporating into teaching ethics and any subject in the curriculum. Anyway, this research is needed to confirm and monitor the students' ethical sensitivity level by it should increase the number of ethical issues to more cover the issue in the real practice and current situation.

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