

ทัศนคติและระดับความมั่นใจในการทำงานนิติเวชศาสตร์ของแพทย์ทั่วไปในภาคใต้ตอนบนของประเทศไทย

สุรศักดิ์ วิจิตรพงศ์จินดา^{1,2} อภิชัย วรรณะพิศิษฐ์^{1,2} อุดมศักดิ์ แซ่โจ้ว^{1,2}

¹สำนักวิชาแพทยศาสตร์ มหาวิทยาลัยวลัยลักษณ์

²โรงพยาบาลศูนย์การแพทย์มหาวิทยาลัยวลัยลักษณ์

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บทคัดย่อ

การปฏิบัติงานด้านนิติเวชศาสตร์นั้นต้องอาศัยบุคลากรที่มีความรู้ความชำนาญ แต่มีข้อจำกัดคือแพทย์ผู้เชี่ยวชาญด้านนิติเวชศาสตร์ในประเทศไทยยังมีจำนวนไม่เพียงพอ แพทย์ทั่วไปจึงมีบทบาทสำคัญในงานนิติเวชและถือได้ว่าเป็นแพทย์กลุ่มหลักที่ให้บริการทางนิติเวชศาสตร์แก่ประชาชน ดังนั้น เพื่อให้การปฏิบัติงานด้านนิติเวชศาสตร์มีมาตรฐาน แพทยสภาจึงได้กำหนดเกณฑ์ความรู้ความสามารถในการประเมินเพื่อรับใบอนุญาตเป็นผู้ประกอบวิชาชีพเวชกรรม พ.ศ. 2555 โดยระบุว่าแพทย์ทั่วไปต้องมีความสามารถในการปฏิบัติงานทางนิติเวชศาสตร์ งานวิจัยนี้มีวัตถุประสงค์เพื่อประเมินความมั่นใจและทัศนคติในการทำงานด้านนิติเวชศาสตร์ของแพทย์ทั่วไป ศึกษาปัญหา อุปสรรคและปัจจัยที่เกี่ยวข้องกับความมั่นใจและทัศนคติในการทำงานด้านนิติเวชศาสตร์ของแพทย์ทั่วไปและเสนอแนวทางแก้ไขปัญหาการทำงานด้านนิติเวชต่อหน่วยงานที่เกี่ยวข้อง เป็นการศึกษาวิจัยเชิงสำรวจ โดยทำการศึกษาในกลุ่มตัวอย่างแพทย์ทั่วไปในภาคใต้ตอนบน ทั้ง 7 จังหวัด เก็บรวบรวมข้อมูลจัดทำโดยการจัดทำแบบสอบถามชนิดตอบด้วยตนเอง วิเคราะห์ข้อมูลด้วยสถิติความถี่ สถิติร้อยละ ผลการสำรวจด้านความมั่นใจและทัศนคติแพทย์ผู้ตอบแบบสอบถามจำนวน 132 คน คิดเป็นร้อยละ 51.6 มีระดับความมั่นใจในการทำงานด้านนิติเวชศาสตร์อยู่ในระดับปานกลาง และร้อยละ 83.6 มีทัศนคติในการทำงานด้านนิติเวชศาสตร์อยู่ในระดับที่เห็นด้วยปานกลางจนถึงระดับเห็นด้วยมากที่สุด สำหรับการศึกษาปัจจัยที่ส่งผลกระทบต่อความมั่นใจในการทำงานด้านนิติเวชศาสตร์ของแพทย์ทั่วไป พบว่าปัจจัยที่ส่งผลกระทบต่อความมั่นใจในการทำงานอย่างมีนัยสำคัญทางสถิติ ได้แก่ เพศ อายุ ลักษณะสถานที่ทำงาน การเรียนรายวิชานิติเวชศาสตร์ และปัญหาบางประการที่พบเจอขณะปฏิบัติงานเกี่ยวกับคดีความผิดทางเพศ ปัญหาด้านการเขียนใบรับรองการตาย ปัญหาด้านการเป็นพยานผู้เชี่ยวชาญในศาล การมีประสบการณ์การเป็นพยานศาลด้านนิติเวชศาสตร์ล้วนส่งผลกระทบต่อความมั่นใจทั้งสิ้น ดังนั้น การเสริมสร้างความมั่นใจให้แพทย์ทั่วไปในการปฏิบัติงานนั้นเป็นสิ่งสำคัญ เพื่อประโยชน์สูงสุดต่อกระบวนการยุติธรรม

คำสำคัญ: นิติเวช ทัศนคติ ระดับความมั่นใจ แพทย์ทั่วไป

ผู้สนับสนุนประสานงาน:

สุรศักดิ์ วิจิตรพงศ์จินดา

สำนักวิชาแพทยศาสตร์ มหาวิทยาลัยวลัยลักษณ์

222 อาคารวิชาการ 9 ตำบลไทยบุรี อำเภอท่าศาลา จังหวัดนครศรีธรรมราช 80160

อีเมล: surasak.vi@wu.ac.th

Attitudes and confidence in the medico-legal work of general practitioners in upper southern region of Thailand

Surasak Vijitpongjinda^{1,2}, Apichai Wattanapisit^{1,2}, Udomsak Saengow^{1,2}

¹School of Medicine, Walailak University

²Walailak University Hospital, Walailak University

Abstract

Performing medico-legal work requires skilled personnel. Because of an insufficient number of forensic doctors in Thailand, general practitioners play a major role in medico-legal work and have become the main group of doctors to provide medico-legal work for the public. The Medical Council of Thailand introduced the Standards for Practice in the Medical Profession 2012 with regard to medico-legal cases. This study aimed to assess the confidence and work attitudes of general practitioners in medico-legal work to study the problems, obstacles, and factors related to their confidence, work attitudes and proposal of solutions. The target population of the survey comprised 256 individuals in the upper southern region of Thailand. The data were collected through survey questionnaires and analyzed using logistic regression statistics. The survey results showed that 132 physicians (51.6%) had a moderate level of confidence in medico-legal work. A total of 83.6% had work attitudes in medico-legal work at the moderate to the highest level of agreement. Gender, age, workplace Characteristics, and teaching and learning of forensic medicine courses were factors associated with confidence in medico-legal work by general practitioners; challenging topics of practice included sexual abuse, writing death certificates, and being an expert witness in court. Therefore, they ensure that general practitioners perform work is involving the judicial process.

Keywords: forensic medicine, attitudes, confidence, general practitioner

Corresponding Author:

Surasak Vijitpongjinda

School of Medicine, Walailak University

222 Thaiburi Subdistrict, Thasala District, Nakhon Si Thammarat 80160, Thailand

E-mail: surasak.vi@wu.ac.th

Introduction

Practicing medico-legal work requires skilled personnel. Forensic medicine is not a mainstream subject for medical practitioners in Thailand. Consequently, the insufficient number of forensic doctors is a challenging issue for Thailand's health systems. In 2016, there were 182 forensic doctors¹, and the majority (>50%) of them worked at universities or medical schools in the capital city, Bangkok. In the Public Health region 11, which covers seven provinces, the total number of doctors was 1,389 in 2016^{2,3}. However, only five forensic doctors were working in this area (one in Ranong and four in Nakhon Si Thammarat), indicating the scarcity of forensic doctors. Therefore, general practitioners (medical graduates who are not certified as medical specialists) are expected to play an important role in forensic medicine as substitutes for forensic doctors.

The workload of medico-legal work for general practitioners consists of two main areas: scene investigation and forensic clinic. Medico-legal work requires knowledge of the Criminal Code, Code of Criminal Procedure, and the Civil and Commercial Code. It is necessary to work in accordance with the law^{4,5,6,7} and strictly follow the standard. Hence, the Medical Council of Thailand has put forth an announcement (No. 12/2555 Re: Medical Competency Assessment Criteria for National License, B.E. 2555) (2012)⁸, to serve as a framework for the standard of qualification for medical graduate institutes to define knowledge professional competence in the

doctor of medicine program covering the practice of forensic medicine, requiring general practitioners to examine and give opinions or to produce patient credentials, persons with disabilities, injured persons, accused or defendants, as required by law, the investigation officer, organization or court in various businesses such as a certificate of health, a certificate of disability, a certificate of death, testimony to the inquiry official and the court including being able to perform an autopsy, collect witness objects from the corpse together with the investigation officer as specified, can issue an autopsy report and can be a witness in the investigation and court. It seeks to enable all medical graduates working as general practitioners to be able to perform forensic science work according to the criteria.

Thai medical schools are expected to provide forensic medicine courses related to autopsy, examining patients, writing reports and giving comments regarding physical and sexual abuse, and testifying in court. The forensic medicine course consists of one week of theoretical instruction and two weeks of practice for the fourth-year medical students. Some institutions impart theoretical knowledge without practical application within 12 hours of the emergency medicine course for fifth-year medical students. Some medical schools offer two weeks of theory classes in the fourth year, and the theory is taught for approximately 8 to 10 hours in the emergency medicine course in the sixth year.

The minority of medical schools have comprehensive teaching throughout the year,

with theory—based instruction in the fourth year for approximately one week, then studying theory and practical in the fifth year for the next two weeks, and theory and practical are taught for approximately 8 to 10 hours in the emergency medicine course in the sixth year. Compared with other courses in the medical curriculum, it is considered inadequate, even though physicians are required to work in forensic medicine regularly. This affects attitudes and confidence in the practice of forensic medicine among general practitioners. Understanding the magnitude of this problem, we have compiled data on the obstacles faced while working in forensic medicine to provide solutions to solve the problems.⁹

Objectives

1. To assess the general physician's confidence and attitude while working in forensic medicine
2. To study the problems, obstacles, and factors related to the general practitioner's confidence and attitude in working in forensic medicine
3. To propose solutions to problems in forensic work to relevant agencies

Materials and methods

Setting and participants

A cross-sectional study was conducted among a sample of general practitioners (N=526) in all seven upper southern provinces (Chumporn, Surat Thani, Nakhon Si Thammarat, Phuket, Phangnga, Krabi, and Ranong) in the

Public Health region 11 of Thailand. The inclusion criteria were general practitioners working in public hospitals classified into three categories: (i) tertiary hospitals (ii) general hospitals, and (iii) community hospitals. Those who were certified medical specialists and graduates from other countries were excluded.

Data collection

A survey questionnaire was used to collect data, including demographic information such as gender, age, place of employment, province, having a doctor specializing in forensic science working in that hospital, graduate institution, studying forensic medicine, forensic medicine practice, and attitude and confidence to work in forensic science. The questionnaires were sent to the seven provincial public health offices and disseminated to hospitals in the provinces.

Data analysis

Data were analyzed using the SPSS version 22 program with logistic regression to determine factors influencing general practitioners' attitudes and confidence in forensic medicine, as well as multivariate analysis to find relationships between various factors. The data analysis assessed attitudes and confidence in general practitioners in forensic medicine.

Ethical approval

This study was approved by the ethic committees of Walailak University (WUEC-16-146-01), Maharat Nakhon Si Thammarat Hospital (EC 25/2018), Vachira Phuket Hospital (VPH REC 009/2018), and Surat Thani Hospital (EC 24/2018).

Results

A total of 256 general practitioners (response rate of 48.67%) returned the questionnaires. Of those, 253 (98.8%) reported no forensic doctor working in the hospitals. More than half were males (n =154, 60.2%)

and aged ≤ 30 years (n = 232, 90.6%). One hundred and seventy-one (66.8%) worked in community hospitals. As for institutions that graduate with a Doctor of Medicine, 60% of them have graduated from regional public universities, as shown in Table 1.

Table 1 The general characteristics of the population groups

General characteristics	Number of individuals (percentage)
Gender	
Male	154 (60.2)
Female	102 (39.8)
Age	
≤ 30	232 (90.6)
31-45	21 (8.2)
46-60	3 (1.2)
Average	27.4
Workplace	
Community hospital	171 (66.8)
General hospital	67 (26.2)
Central hospital	18 (7)
Province	
Nakhon Si Thammarat	79 (30.9)
Surat Thani	36 (14.1)
Chumporn	42 (16.4)
Krabi	30 (11.7)
Phang Nga	24 (9.4)
Ranong	15 (5.9)
Phuket	30 (11.7)
There is a forensic doctor working in a hospital	
No	253 (98.8)
Yes	3 (1.2)
An institution that graduated with a Doctor of Medicine degree	
Government universities in Bangkok and suburbs	97 (37.9)
Regional government universities	153 (59.8)
Private university	6 (2.3)

The results showed that the respondents who performed the treatment of patients or forensic investigation of deaths

over the past 12 months were up to 57.4%. Survey results of confidence and attitudes among 132 respondents show that 51.6% have

a moderate level of confidence in forensic medicine. As shown in Table 2, 83.6% had work attitudes in forensic science at a “moderate” to “most agreeable” level.

From the survey of information about forensic science courses, it was found that all the respondents studied forensic medicine. Most of the respondents (70%) studied forensic medicine in the fifth year for 2 weeks, as shown in Figure 1. There is both lecture

and problem-based learning (PBL) instruction. Only 50% of the respondents took practical forensic medicine courses, which consist of clinical examination practice, passed the autopsy at the scene and attended the observation as a witness to the court. As shown in Figure 2, about 40% of them had taken practical lessons by practicing with the police.

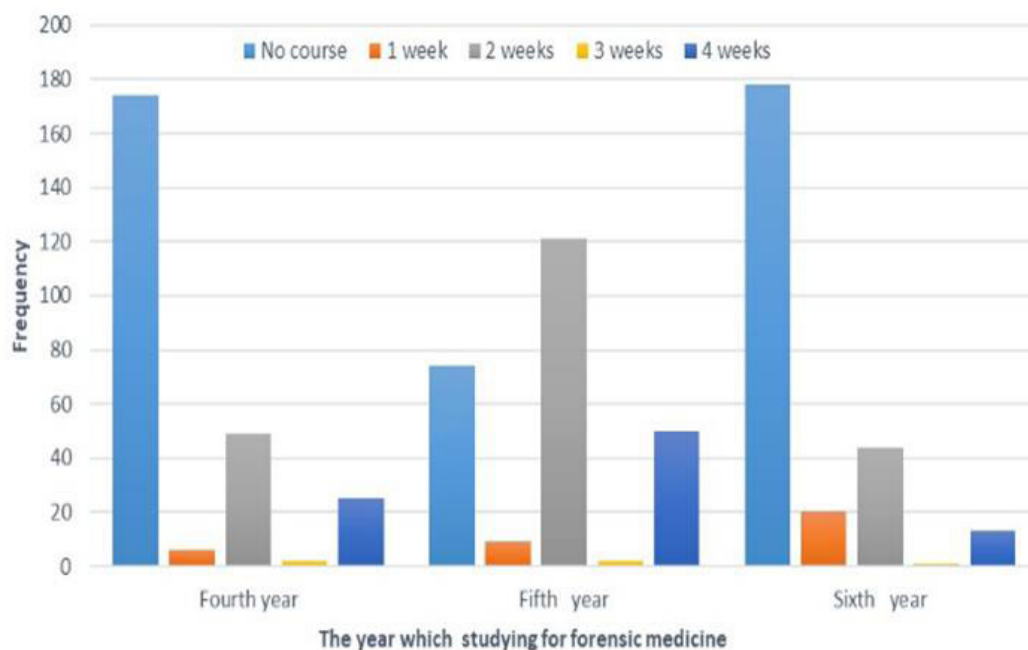


Figure 1 Information on forensic science courses

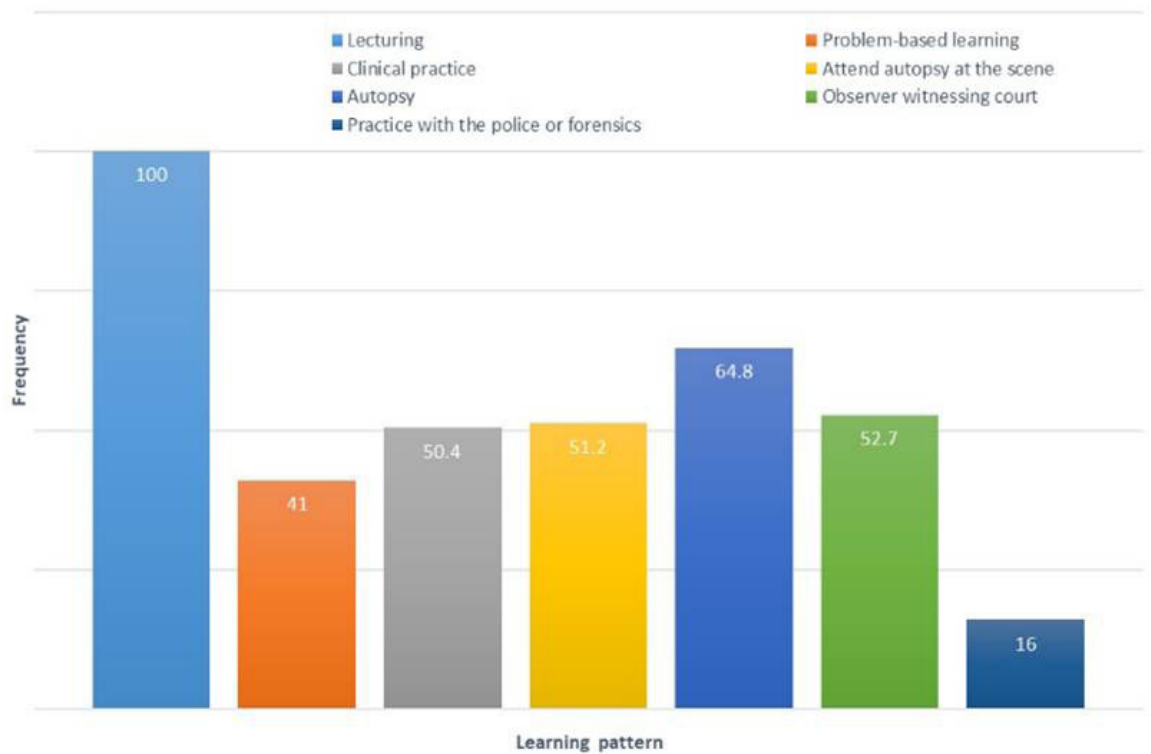


Figure 2 The learning pattern of forensic science courses

Table 2 Level of confidence and work attitude in forensic medicine

Variable		Amount of Data 256	
		Frequency	Percentage
Confidence in medico-legal work	Highest confidence	1	0.4
	High confidence	7	2.7
	Moderate confidence	132	51.6
	Little confidence	96	37.5
	Least confidence	20	7.8
Attitude to medico-legal work	Highly agree	19	7.4
	Agree	95	37.1
	Moderately agree	100	39.1
	Less agree	25	9.8
	Least agree	10	3.9
	Disagree	7	2.7

The factors affecting the confidence of general practitioners in medico-legal work were statistically significant. For common factors, it was found that gender and age were statistically significant factors associated with the confidence level.

In the group of affiliated hospitals, factors affecting the confidence of general practitioners in medico-legal work were statistically significant and consisted of the type of hospital in which general practitioners (OR 0.07, 95%CI 0.01 to 0.68) are less confident in working in forensic science than those who work in community hospitals. General practitioners working in Chumporn, Krabi, Ranong, and Phuket are less confident than those who work in Nakhon Si Thammarat as the latter had an approachable consulting system.

For the teaching and learning factors of forensic medicine courses, it was found that the factors affecting the confidence of general practitioners in forensic science were

significantly as follows, the course of forensic medicine through autopsy. On the chance that general practitioners studying forensic science through the autopsy will be 2.7 times more confident in their work in forensic science compared to general doctors who do not study forensic science through the autopsy.

Factors of different types of forensic work behavior did not affect the confidence level of the respondents in the last 12 months in medico-legal work. However, the results of the survey show that if they have problems working in forensic science and have requested a court witnessing matter, writing a mortality certificate from a forensic doctor will have a statistically significant effect on the general practitioner's confidence in forensic work. When the data were examined further, it was discovered that 75.4% of general practitioners with medico-legal work experience would be more confident in working in forensic medicine than those with no experience working in forensic medicine.

Table 3 Factors affecting confidence in forensics practice

Factors	Odds Ratio	95% CI	p-value
Common factors			
Gender Male: Female	34.32	(2.48, 475.37)	0.008*
Age (1-year increments)	3.24	(1.29, 8.17)	0.013*
Type of Hospital			
General hospital	0.07	(0.01, 0.68)	0.022*
Central hospital	1.54	(0.07, 34.54)	0.787
Factors of Learning for forensic science courses			
Studying Forensic Medicine in Year 4	3.66	(0.28, 47.21)	0.320
Studying Forensic Medicine in Year 5	33.99	(2.48, 466.58)	0.008*
Studying Forensic Medicine in Year 6	48.76	(2.57, 925.89)	0.010*

Table 3 Continued

Factors	Odds Ratio	95% CI	p-value
Factors of the Forensic Medicine Instructional Model			
Study by Problem-based learning	1.33	(0.56, 3.19)	0.517
Study by clinical examination practice	0.00	(0.00, 0.19)	0.007*
Study by going to an autopsy at the scene	0.92	(0.32, 2.64)	0.885
Study by attending an autopsy	2.70	(1.10, 6.62)	0.030*
Study by observation as a court witness	0.42	(0.17, 1.06)	0.066
Study by joint practice or simulate practice with the police for evidence	0.57	(0.17, 1.87)	0.352
Factors of the nature of work in forensic medicine in the last 12 months			
Conduct medical examinations for patients or the deceased who have problems related to forensic science at the emergency room.	1.04	(0.28, 3.83)	0.956
Conduct examination of patients or deceased who have problems related to forensic medicine at the outpatient department.	1.21	(0.39, 3.79)	0.743
Conduct examination of patients or deceased who have problems related to forensic medicine at the inpatient department.	1.65	(0.48, 5.65)	0.428
Perform an autopsy on the scene of the patient or deceased who has problems related to forensic science at the crime scene.	0.62	(0.24, 1.64)	0.338
Factors of problems encountered while working in forensic medicine and requiring a consultation with a forensic doctor in the past 12 months			
Traumatic or injury problems	1.86	(0.65, 5.26)	0.244
Problems with sex offenses	1,227.32	(15.79, 95,364.72)	0.001*
Problems with writing an autopsy report at the scene	0.60	(0.24, 1.48)	0.268
Problems with writing death certificates	0.23	(0.09, 0.59)	0.002*
Problems of expert witnessing in court	0.18	(0.04, 0.76)	0.020*
Problems in practice related to child abuse and domestic violence	0.47	(0.10, 2.22)	0.343
Problems in performing work related to toxic and addictive substances	0.57	(0.15, 2.19)	0.415
Other operational factors			
Having a witness with experience in forensic medicine	0.24	(0.07, 0.90)	0.034*

Discussion

The requirements for practicing forensic medicine for physicians are specified in the Notification of the Medical Council of Thailand 2012⁸, Section B, Article 1.6. "Able to examine and give opinions or make a

certificate about the patient, persons with disabilities, injured persons, accused or defendants, as required by law, the investigation officer, organization or court in various businesses, such as certificate of health, certificate of disability, medical certificate of

cause of death, testimony to the inquiry official and the court” and Article 1.7. “Able to perform an autopsy, collect evidence from the corpse together with the investigating officer as required, issue an autopsy report and give evidence as a witness at the interrogation level and the court.” If physicians have a poor attitude toward working in forensic medicine and are not confident in performing this duty, it can affect the judicial process in many ways. According to the attitude survey of general practitioners, 83.6% had attitudes to work in forensic medicine at the “moderate” to “most agreeable” level. However, 16.4% “disagreed” with general practitioners requiring to work in forensic medicine.

Although general doctors agree with medico-legal work, they lack confidence. This study found that 51.6% of general practitioners had a moderate level of confidence in working in forensic medicine. This is consistent with past research on the overview of general doctors’ abilities to perform medico-legal work, which found that the doctors were poorly skilled, had low confidence and had an average ability to perform at an average level.^{9,10,11,12} Moreover, similar findings were reported in a “Study of Handling of Medical Legal Cases in Governmental Hospitals in Cairo,” which assessed the physicians’ attitude toward handling medico-legal cases and found 59.7% strongly agreed with the proper handling of medico-legal cases¹³. In the research that studied the attitude of the sixth-year medical students of the Faculty of Medicine, Khon Kaen University, for the study

of forensic medicine courses, it was found that 64.33% of the sixth-year medical students were confident in going out to perform their duties of medico-legal work¹⁴. Most studies on confidence are moderate. Therefore, it is necessary to study the factors that affect confidence to increase effectiveness in the medico-legal work of general practitioners. Factors associated with work confidence were gender and age. This is because certain forensic work, such as autopsies at the accident site, are often conducted in remote areas at night, relying on work experience. Consequently, male practitioners are more comfortable and flexible than females, demonstrated that belief in the safety of doctors in the workplace, whether it is a duty to have staff to assist, as well as the safety of traveling by hospital vehicles. Regarding the age factor, young and recently graduated doctors have little confidence in their work. Therefore, training for handling medico-legal case skills and knowledge should be arranged before actual practice and should encourage physicians to attend regular forensic training.

Workplace behavioral factors were found to affect confidence in medico-legal work as well. Doctors working in general hospitals have less confidence in performing medico-legal work than physicians in community hospitals because there are many physicians in general hospitals, resulting in medical interns performing certain medico-legal tasks. Consequently, it causes less forensic workload than community hospital doctors, resulting in less confidence in forensic

work. When studying the academic factors, the result shows that a responding doctor who studied forensic medicine in year 5 and was taking a forensic medicine course in year 6 will be more confident than those who did not. According to a survey on the attitudes of the sixth-year medical students at Khon Kaen University, most of them agreed that additional time should be added to the fifth and the sixth year because the continuous study makes them understand the content and enable them to learn all the topics.¹⁴ As it appears from past research on “Getting to the core of medicine: Developing undergraduate forensic medicine and pathology teaching.” Study about the importance of forensic medicine after teaching and learning of forensic medicine and pathology in the undergraduate medical curriculum has been in decline for decades in the United Kingdom. They created a new course for the year 3 core curriculum and designed it for multi-disciplinary panel case study discussion. Forensic medicine and pathology remain essential core skills for medical students in preparation of their future clinical practice.¹⁵ General practitioners have expressed the necessity for increasing the number of classes as they are inadequate, and the number of hours allocated to practical study being low. It was found that general practitioners had inadequate learning and practice. A study that assessed the need for medico-legal education in interns found that only six (5.2%) interns were able to write medical certificates properly.¹⁶ A study of general doctors in Khon Kaen province showed problems in

writing delivery notes for the injured person or the corpse for the autopsy. It was found that the teaching and learning related to forensic clinical writing were inadequate, which led to insecurity about going out and performing that duty. Almost all problems arise with post-mortem related writing in various cases, including writing death certificates, which doctors have minimal experience with, and past studies have found that several death certificates were written deviating from the guidelines. The 2016 study which assessed improvement in the skill of interns in writing injury certificates, shows that learning with case demonstration and didactic lectures improve the writing skills as well as in dealing with medico-legal cases.¹⁷ In addition, the learning instruction played an important role. From this study, it was found that by learning a clinical examination practice and studying with a full autopsy; they are more confident in performing their work compared with unskilled doctors. Although general practitioners are not obliged to perform a full autopsy, understanding how the system works allows them to explain the process of submission procedure for autopsy and autopsy procedure to those involved, resulting in more confidence in the work. Being an expert witness in court also greatly affects general practitioners’ confidence; if the doctor is required to be an expert witness in court, it significantly reduces their confidence in forensic work when compared to doctors who have never been to court. The study of sixth-year medical students found that

medical students still experienced anxiety and insecurity about having to graduate and performing duties as a witness, an investigation officer, or a witness in court because of the insufficient teaching and learning on such topics. The study found that confidence in performing the forensic science workload was low¹⁰, which can be seen from the request of the inquiry official for further interrogation. And when testifying in court, a physician's lack of confidence in court testimony can adversely affect the judicial process. Besides their role in providing testimony, most doctors have to testify in the position of an expert, providing opinions in conjunction with the claim of their own knowledge and ability. Moreover, nowadays, if there is a problem or an addiction to the cause of death or suspicion of the treatment and service of a medical facility, associates often take a death certificate with a doctor's signature to the press, or even take pictures and appear in public media. This affects the confidence in the work of the doctor.

Several recommendations were emerged from this study, including: 1) fostering confidence and a sense of security in the field of forensic medicine for new graduate doctors, 2) providing a systematic way to consult with a specialist doctor and consult immediately when encountering problems, 3) regularly organizing training to increase knowledge and skills in forensic medicine practice for general practitioners, 4) providing forensic medicine courses in the fifth or sixth year and should be taught in clinical examination practice form

(Medico-Legal), and 5) providing teaching and learning to have experience and gain practical training in the field of forensics, for example, testifying in court; organizing a court visit; and observing.

For this study, the limitation involved gaining access to the target population because doctors are usually burdened with heavy workloads and may not be able to take time to complete questionnaires. The use of questionnaires may yield broader data than insights. For research work to be completed or to be developed, the researcher found that the data collection pattern should be adjusted. The survey questionnaire should be converted to a direct interview to obtain more in-depth information on the issue.

Conclusions

In this study, the attitudes and confidence of general doctors in medico-legal work in the upper South of Thailand were examined. The results showed that 132 physicians, 51.6% of respondents had a "moderate" level of confidence in medico-legal work, and 83.6% had an "agreed" level of work attitude in medico-legal from "medium" to "most agree." Factors that affect the level of confidence at work are gender, age, type of workplace, and teaching and learning factors for forensic medicine courses. Problems encountered during the work are performance problems related to sexual offenses, problems with writing death certificates, being an expert witness in court, and having court witnessing experience in forensic medicine.

Currently, there are few specialists in forensic medicine who only work in certain areas. Practicing forensic science remains the role of general practitioners. Building confidence and a positive attitude toward working with general practitioners is essential for the best interests of the justice system. Forensic evaluation has complicated issues of both the health and the law, and it is a challenging field for general practitioners^{18,19,20}.

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