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General Public's Attitudes Toward Disclosure of Patient Safety Incidents in Korea: Results of Disclosure of Patient Safety Incidents Survey I

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Objectives: Many countries and organizations have promoted the disclosure of patient safety incidents (DPSI). However, reporting frequency and quality of DPSI fall short of patient and caregiver expectations. In this study, we examined the attitudes toward DPSI of the general public representing the Korean population.

Methods: Survey questions were developed based on a previous systematic review and qualitative research. Face-to-face interviews using paper-based questionnaires were conducted. We explored attitudes toward DPSI in various scenarios and opinions on methods to facilitate DPSI.

Results: Almost all participants answered that it is necessary to disclose major errors (99.9%) and near misses (93.3%). A total of 96.6% (675/699) agreed that “DPSI will lead physicians to pay more attention to patient safety in the future,” and 94.1% (658/699) agreed that “DPSI will make patients and their caregivers trust the physician more.” Although 79.7% (558/700) agreed that “apology law will limit patients' ability to prove physicians' negligence,” 95.4% (668/700) agreed with “I support the introduction of apology law.” Moreover, 90.6% (634/700) agreed with “I support the introduction of mandatory DPSI.”

Conclusions: This study showed the overwhelmingly positive attitude of the public toward DPSI. The positive opinion of the public about apology law suggests the possibility of introducing the disclosure policy coupled with legislation of apology law in South Korea.

Key Words: patient safety, disclosure of patient safety incidents, Republic of Korea, adverse event, medical error

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Patient safety is an essential element of medical care.¹ Patients and their caregivers expect to receive medical care safely and consider the service to be delivered securely. Despite the best efforts of medical professionals, the current level of patient safety does not seem to satisfy the expectations of patients. A systematic review of adverse event occurrences in hospitals showed that the likelihood of an admitted patient experiencing an adverse event was 9.2% and 7.4% of these events led to death.² In addition, 43.5% of these adverse events were preventable. Accordingly, patient safety has become an emergent policy issue around the world.³ The pressure of agenda setting and policy

changes has yielded discussions of the management of the patient safety issue; this in turn has led to a debate on how to improve patient safety. Therefore, the effort of searching policies and interventions to employ the most effective solutions to enhance patient safety with the fewest obstacles has been pursued.^{4,5}

One of the most important problems in patient safety is how to manage patient safety incidents that have already happened.⁶ Responding to the patient safety incidents to minimize any additional damage caused by the incidents is important. Tort law, no-fault liability for compensation, the alternative dispute resolution system, and disclosure of patient safety incidents (DPSI) are examples of the legislations and institutions involved in the response to patient safety incidents.⁶ Among them, DPSI can be viewed as a more progressive and advanced responding activity, because it can prevent disputes around patient safety incidents in advance. Disclosure of patient safety incidents is defined as follows⁷: “When a patient safety incident occurs, medical professionals pre-emptively explain the incident to the patients and their caregivers, express sympathy and regret for the incident, deliver apology and compensation appropriately if needed, and promise to prevent recurrence.” The no-fault liability for compensation and the alternative dispute resolution system were adopted to overcome the limitations of tort law in resolving medical disputes. Moreover, DPSI can settle patient safety incidents before involvement of the alternative dispute resolution system.⁶

Many countries and organizations have promoted DPSI.^{8–10} Experiences of DPSI have been reported in some Western countries.^{11,12} However, in-depth discussion of DPSI has not taken place in non-Western countries, including South Korea (hereinafter Korea). Furthermore, there remains a perception gap for the expected effects of DPSI between medical professionals and the general public.¹³ In addition, reported frequency and quality of DPSI fall short of patients and caregiver expectations.¹³ Therefore, opinions about the barriers and facilitators of DPSI need to be identified to promote DPSI. In Korea, there is no research that confirms the attitudes toward DPSI of the general Korean population. In this study, we aimed to examine the attitudes of the public, representing the Korean adult population, toward DPSI, including the effects, barriers, and facilitators of DPSI.

METHODS

Development of Survey Questions

A survey was conducted to investigate the attitudes of the general public toward DPSI in Korea. Two of authors (M.O. and S.I.L.) developed the draft of questionnaire based on a previous systematic review¹³ and qualitative research⁷ in Korea. After the survey draft, a patient safety expert in the civic group reviewed the contents and modified some of the question items and phrases. The relevance of the content and wording was evaluated in a cognitive debriefing interview with 2 laypersons. They confirmed that the questionnaire was easy to understand.

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TABLE 1. Characteristics of Study Participants

Variable	In This Study		Resident Registration Data*	P [†]
	n	%	%	
Age group, y				0.924
19–29	125	17.9	17.7	
30–39	131	18.7	18.5	
40–49	148	21.1	21.4	
50–59	139	19.9	19.8	
≥60	157	22.4	22.6	
Sex				1.000
Male	348	49.7	49.6	
Female	352	50.3	50.4	
Educational level				—
Elementary school or below	43	6.1	—	
Middle school	57	8.1	—	
High school or attending college	495	70.7	—	
College or above	105	15.0	—	
Religion				—
Yes	327	46.7	—	
No	373	53.3	—	
Physicians or nurses in the family				—
Yes	71	10.1	—	
No	629	89.9	—	

*Data are from the Ministry of Government Affairs and Home Affairs in June 2015.

[†]χ² test in SPSS 21.0.

The survey questions are divided into the following 3 sections: sociodemographic factors, attitudes toward DPSI in various scenarios, and opinions on methods to facilitate DPSI. First, the sociodemographic factors section surveyed residential area, sex, age, level of education, religion, and whether the participants have physicians or nurses in family. The scope of family was limited to parents, siblings, and children of their own. Second, in the attitudes toward DPSI in various scenarios section, attitudes toward DPSI according to the level of harm resulting from medical errors, attitudes toward DPSI according to the various scenarios in patient safety incidents, opinions on effects of the DPSI, and perceptions of barriers to DPSI were all assessed. In the third section, we explored opinions on facilitating methods of DPSI, including guidelines for the DPSI, apology law, and other approaches. A 4-point Likert scale was used, which included “strongly disagree,” “disagree,” “agree,” and “strongly agree.”

Conducting the Survey

We conducted the survey in cooperation with Gallup Korea, who helped to recruit professional interviewers. One of authors (M.O.) had a 90-minute training session for survey interviewers with the questionnaire. Face-to-face interviews using paper-based questionnaires were performed. Quota sampling was applied to select study participants representing Korean adult population. We used sex, age, and residential area (excluding Jeju Island) as variables to divide the population into separate subgroups for quota sampling. The standard population was Koreans registered by June 2015 in the population statistics of the Ministry of Government Administration and Home Affairs. The survey was conducted for approximately 1 month during July and August 2015. Because we were concerned about the participants' unfamiliarity with terminologies, such as patient safety, patient safety

incidents, adverse event, medical error, near miss, and DPSI, we gave the participants detailed explanations of these terms with visual aids.

Data Analysis

We conducted a χ² test or Fisher exact test to identify significant differences in responses according to sociodemographic

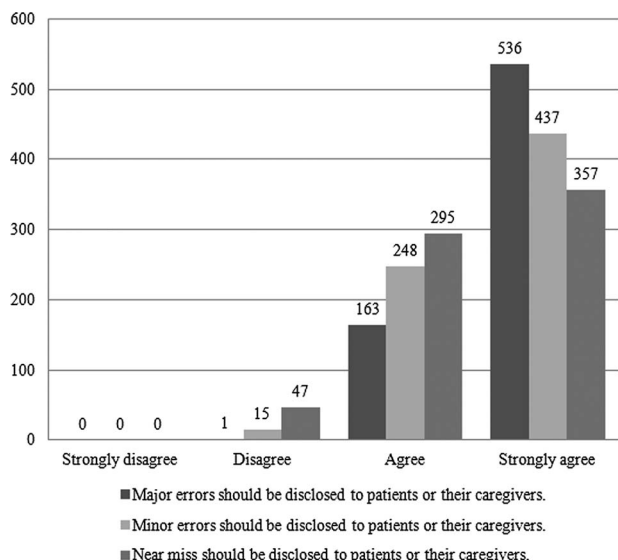


FIGURE 1. Perceptions of DPSI according to the level of harm resulting from medical errors.

TABLE 2. Attitudes Toward DPSI According to the Various Scenarios in Patient Safety Incidents

	Strongly Disagree, n (%)	Disagree, n (%)	Agree, n (%)	Strongly Agree, n (%)
DPSI should be performed, even if a physician thought that patients and their caregivers would not be able to understand what the physician said.*	0 (0.0)	5 (0.7)	249 (35.6)	445 (63.7)
DPSI should be performed, even if a physician thought that patients and their caregivers would not want to know about patient safety incidents.	3 (0.4)	39 (5.6)	287 (41.0)	371 (53.0)
DPSI should be performed, even if a physician thought that patients and their caregivers could not know whether patient safety incidents occurred.	1 (0.1)	29 (4.1)	360 (51.4)	310 (44.3)
DPSI should be performed, even if a physician thought that patients and their caregivers have nothing to gain by acknowledging patient safety incidents.	5 (0.7)	71 (10.2)	331 (47.4)	292 (41.8)
The better previous physician-patient relationship, the more DPSI will be performed.	5 (0.7)	46 (6.6)	347 (49.6)	302 (43.1)

*There was 1 missing value.

factors (level of significance <0.05). Microsoft Excel 2007 (Microsoft Corporation, Seattle, WA) was used for data processing and Stata/SE13.1 (StataCorp, Texas, TX) and SPSS 21.0 (IBM Corp, New York, NY) were used for statistical analyses.

Ethical Approval

This study was approved by the institutional review board of Asan Medical Center (2015–069). Before enrollment, we explained the objectives and processes of this study to the participants and obtained their informed consent.

RESULTS

Characteristics of the Participants

The response rate of the survey was 39.8%. Table 1 shows the sociodemographic characteristics of all 700 participants. The mean (SD) age of the participants was 45.5(14.5) years. There was no statistically significant difference in the age group and sex ratio compared with the population data of the Ministry of Government Administration and Home Affairs in June 2015.

Attitudes Toward DPSI According to the Level of Harm Resulting From Medical Errors

Almost all of the participants showed support for DPSI, regardless of the type of medical error (Fig. 1). A total of 699 participants

(99.9%) answered that it is necessary to disclose major errors, and 653 participants (93.3%) expressed the same opinion for a near miss.

Attitudes Toward DPSI According to the Various Scenarios in Patient Safety Incidents

Most participants believed that DPSI is necessary regardless of the various scenarios in patient safety incidents (Table 2). In particular, 99.3% (695/699) agreed that “DPSI should be performed, even if a physician thought that patients and their caregivers would not be able to understand what the physician said,” and 95.9% (670/700) agreed that “DPSI should be performed, even if a physician thought that patients and their caregivers could not know whether patient safety incidents occurred.” Furthermore, most participants (649/700) thought that more DPSI will be performed when a better previous physician-patient relationship exists.

Opinions on Effects of the DPSI

In addition, most of the participants showed positive reactions to the effects of DPSI (Table 3). A total of 96.6% (675/699) agreed that “If DPSI will lead physicians to pay more attentions to patient safety in the future,” and 94.1% (658/699) agreed that “DPSI will make patients and their caregivers to trust the physician more”; the responses to both of these statements demonstrated a very high level of support for DPSI. Furthermore, 86.3% (594/698) of participants thought that DPSI will lessen feelings of guilt for a physician.

TABLE 3. Opinions on the Effects of DPSI

	Strongly Disagree, n (%)	Disagree, n (%)	Agree, n (%)	Strongly Agree, n (%)
DPSI will make patients and their caregivers to trust the physician more.*	5 (0.7)	36 (5.2)	329 (47.1)	329 (47.1)
I am more likely to recommend a physician who performs DPSI.*	13 (1.9)	89 (12.7)	358 (51.2)	239 (34.2)
I will revisit a physician who performs DPSI.*	17 (2.4)	67 (9.6)	390 (55.8)	225 (32.2)
A physician who performs DPSI will offer better medical services.†	5 (0.7)	70 (10.0)	357 (51.1)	266 (38.1)
DPSI will lead physicians to pay more attention to patient safety in the future.*	0 (0.0)	24 (3.4)	386 (55.2)	289 (41.3)
DPSI will lessen feelings of guilt for a physician.†	11 (1.6)	93 (13.3)	401 (57.4)	193 (27.6)

*There was 1 missing value.

†There were 2 missing values.

TABLE 4. Perceptions of Barriers to the DPSI

	Strongly Disagree, n (%)	Disagree, n (%)	Agree, n (%)	Strongly Agree, n (%)
DPSI will increase the incidence of medical lawsuits.	50 (7.1)	251 (35.9)	286 (40.9)	113 (16.1)
If DPSI is performed, a physician will lose his or her honor.	114 (16.3)	347 (49.6)	184 (26.3)	55 (7.9)
If DPSI is performed, the physician will be punished by his or her hospital.*	105 (15.0)	316 (45.2)	236 (33.8)	42 (6.0)
A physician who performs DPSI is less competent. ¹	174 (24.9)	401 (57.4)	99 (14.2)	25 (3.6)
If DPSI is performed, the physician will be criticized by his or her colleagues.	75 (10.7)	334 (47.7)	253 (36.1)	38 (5.4)
It is unreasonable to demand DPSI in the only medical field, because disclosure is not actively conducted in other fields.*	97 (13.9)	321 (45.9)	234 (33.5)	47 (6.7)

*There was 1 missing value.

Perceptions of Barriers to DPSI

Opinions on potential barriers to DPSI were divided (Table 4). In particular, 57.0% (399/700) of the participants agreed that “DPSI will increase the incidence of medical lawsuits,” whereas 43.0% (301/700) disagreed. Approximately 60% (421/699) of participants thought that a physician who performed DPSI will be not punished by the hospital; however, 40% (278/699) thought the opposite. Only 17.7% (124/699) agreed that “A physician who performs DPSI is less competent,” and 82.3% (575/699) disagreed. Meanwhile, 40.2% (281/699) agreed that “It is unreasonable to demand DPSI in the only medical field, because disclosure is not actively conducted in other fields,” but 59.8% (418/699) disagreed.

Opinions on Methods to Facilitate DPSI

Nonlegal measures for facilitating DPSI gained agreement from most of the participants (Table 5). Almost all (99.6%) agreed that “It is necessary to strengthen the ethical mindsets of physicians for DPSI,” and 97.4% (682/700) agreed that “A training course for DPSI is needed.” Most participants recognized the necessity of guidelines for DPSI (681/700) and of hiring manpower to support DPSI in hospital (666/700). Most participants also agreed that legal measures for facilitating DPSI are required (Table 5). A total of 79.7% (558/700) agreed that “Apology law will limit patients' ability to prove physicians' negligence,” but 95.4% (668/700) agreed with the statement “I support the introduction of apology law.” Furthermore, 90.6% (634/700) agreed with the statement “I support the introduction of mandatory DPSI.”

In general, meaningful trends could not be identified in the responses according to sociodemographic factors. The results

from the χ^2 or Fisher exact tests are available in Supplement 1, <http://links.lww.com/JPS/A117>.

DISCUSSION

In this study, we explored the attitudes of the general public in Korea toward DPSI by surveying 700 persons representing the Korean population. Specifically, we determined the attitudes toward DPSI in relation to various factors, including the effects, barriers, and facilitators of DPSI. We evaluated the attitudes of a relatively large sample, which is a major strength of this study. Furthermore, this study is important because previous DPSI research has mainly been conducted in Western countries¹³; thus, ours is one of the few studies performed in Asian countries. The results of this study could be used as supporting data for the introduction of DPSI in Korea.

Our study showed that most of the general public in Korea recognized the need for DPSI. It showed a similar result to previous studies conducted in other countries.^{14–19} The participants expressed stronger preference for DPSI in this study than in a qualitative study performed in Korea.⁷ Furthermore, the positive response rate to DPSI in near misses (93.3%) is higher than that of other studies.^{16,20} However, Lee et al.²¹ reported that 54.5% of medical students and 46.3% of interns from 1 hospital in Korea disagreed with the disclosure of a near miss. We assume that there is a discrepancy in opinions on the disclosure of a near miss between the general public and medical professionals. Ock et al.⁷ determined that Korean physicians were skeptical about the need for DPSI in near misses; however, we have shown the public's preference for DPSI even in near misses. Positive attitudes of the public toward DPSI seem to be similar to those in Western countries,

TABLE 5. Opinions on Legal and Nonlegal Measures for Facilitating the DPSI

	Strongly Disagree, n (%)	Disagree, n (%)	Agree, n (%)	Strongly Agree, n (%)
It is necessary to strengthen the ethical mindsets of physicians for DPSI.	0 (0.0)	3 (0.4)	225 (32.1)	472 (67.4)
A training course for DPSI is needed.	0 (0.0)	18 (2.6)	282 (40.3)	400 (57.1)
Manpower to support DPSI in hospitals is required.*	1 (0.1)	32 (4.6)	336 (48.1)	330 (47.2)
A guideline for DPSI is needed.	1 (0.1)	18 (2.6)	311 (44.4)	370 (52.9)
If apology law is enacted, physicians will perform more DPSI.	4 (0.6)	36 (5.1)	340 (48.6)	320 (45.7)
Apology law will limit patients' ability to prove physicians' negligence.	11 (1.6)	131 (18.7)	343 (49.0)	215 (30.7)
I support the introduction of apology law.	6 (0.9)	26 (3.7)	393 (56.1)	275 (39.3)
I support the introduction of the mandatory DPSI by law.	6 (0.9)	60 (8.6)	381 (54.4)	253 (36.1)

*There was 1 missing value.

even though there are concerns that communicating an apology, including DPSI, is more difficult in non-Western countries.¹¹

Most participants also had positive opinions about the effects of DPSI. Approximately 90% of them agreed with the main effects of DPSI, such as an increase in a physician trust, the intention to revisit and recommend a physician, and perceived quality of care, as well as a decrease in feelings of guilt of the physician. However, opinions were divided on the barriers to DPSI among the participants. Approximately 60% of participants thought that a physician who performed DPSI would not be punished by their hospital; however, 40% thought the opposite. In particular, approximately half (57.0%) of participants expected that DPSI would increase the incidence of medical lawsuits. Compared with previous studies findings,^{19,22–26} more people showed concern about DPSI. However, this result should be interpreted with caution, because of comparability problems resulting from differences in survey questions, vignettes, and other study methodologies between the studies.

The general public's preference for DPSI was also revealed in the answers to the methods of promoting DPSI. To disseminate the practice of DPSI desired by the general public, including patients, more widely, it is necessary to reduce not only the psychological barriers for medical professionals but also administrative or legal ones. Therefore, it is essential to introduce legal and non-legal strategies to encourage medical professionals to undertake DPSI. Most members of the general public acknowledged the need of this kind of approach, as shown in the survey results. Most participants agreed with the need for a training course and guidelines for DPSI, as well as additional manpower to support DPSI in hospitals.

In particular, it is noticeable that the legal strategy for facilitating DPSI had positive responses. Apology law has been enacted to prohibit a physicians' apology being used as evidence of their negligence in medical lawsuits.²⁷ It is expected that apology law allows physicians to easily make an apology and thereby reduce the costs resulting from medical disputes. As proven in a qualitative study,⁷ although most participants (80%) expected that apology law would limit patients' ability to prove a physician's negligence at medical lawsuits, approximately 95% of them agreed with the legislation of apology law. Although Western countries such as the United States and Canada have legislated apology law, this kind of law is less common in non-Western countries.¹² We confirmed the positive attitudes toward the legislation of apology law among most Koreans. Furthermore, public discussions about the institution of DPSI, including apology laws, seem to be necessary in Korea, because more than 90% of participants agreed on mandatory DPSI according to the law.

There were several limitations in this study. First, we could not determine the characteristics of people who refused to participate in the survey (39.8%). Furthermore, we could not completely rule out the possibility that the participants could not represent Korean adult population exactly, because Jeju Island was excluded from the survey. However, as shown Table 1, there is no statistical difference in age group and sex between the study subjects and the Korean adult population. Only 1% of Korean population lives in Jeju Island. Therefore, this might not strongly influence the representativeness of the study results. The second limitation of this study is that our results may not be generalized to the population outside of Korea. More studies from other countries, particularly non-Western countries, targeting the general public will be required to understand country-specific situations. This study can be used as a reference for any such future studies. Finally, because no study has determined the attitudes of the representative sample of medical professionals in Korea toward DPSI, we could not compare their attitudes with those of the general public. Although

one study has evaluated the perceptions of DPSI by medical professionals in Korea,²¹ its representativeness was limited. In addition, this study focused only on medical students and interns. Further research will be needed to explore the attitudes of the representative medical professionals in Korea toward DPSI. These kinds of studies will provide empirical data to reduce the gap between medical professionals and patients in medical error communication in the real world.

CONCLUSIONS

In conclusion, this study was conducted to determine the attitudes of Koreans toward DPSI; the survey was conducted for 700 persons representing the Korean population. The results showed that Koreans have a very high level of support for DPSI and agreed on its positive effects. Positive public opinions of apology law suggest the possibility of introducing a disclosure policy coupled with legislation of apology law in Korea.

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