

Investigating the Importance of Implementing Ethical Value on a Healthcare System within a Social Media context

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Nowadays, the demand of people looking at healthcare information through social media is increasing. The interaction between humans and the healthcare system has created an abuse of ethical conduct. The objective is to measure the importance of implementing ethical value on the healthcare system in social media and identify ethical value. The method of data gathering is survey on a questionnaire to 129 respondents (18 doctors, 33 nurses, and 78 public). As a result 94.6% respondents agree ethics is important in social media and 91.88% respondents agree ethical value should be implemented in any healthcare system.

Key words: *Ethics, Ethical Value, Healthcare System, Social Media.*

Introduction

Healthcare has become an important aspect of human life when knowing the human body's weaknesses of suffering from a disease. The awareness of human beings is to understand the human body mechanism to avoid diseases. To avoid diseases, people usually find information on a particular disease through social media.

The number of people or the public looking for healthcare information in social media is growing. And social media also become effective tools for engaging people to find information on healthcare (Modahl, 2011). At the same time, most of the junior doctors using social media as an interaction tool with the patient (Thompson et al., 2008) and the interaction between patients and doctors on healthcare dialogue or information in social

media are rising (Brown, 2014; Fisher & Clayton, 2012; Modahl, 2011). Therefore, social media is becoming a media of healthcare information and consultation such as Twitter and Facebook (Attai DJ., Cowher MS., Al-Hamadani M., Schoger JM., Staley AC., 2015; Hale, Pathipati, Zan, & Jethwani, 2014). However, the interaction process between patients and doctors in social media has created an ethical dilemma on privacy, confidentiality, and protection from public access (Brown, 2014; Fisher & Clayton, 2012) and another ethical dilemma on the violation of patient confidentiality was increasing from 2009 to 2013 (figure 1).

Based on figure 1, the author could conclude the awareness of ethical values becomes an important aspect of the healthcare system in social media. Therefore, it requires an ethical value on the healthcare system to protect the system from an unethical physician or person. Therefore, the objective of this research is synthesising the existing ethical framework for identifying the ethical value.

Literature Review

This part of the literature will explain the principle of ethics, synthesising existing ethical frameworks, and identifying ethical value.

The Principles of Ethics

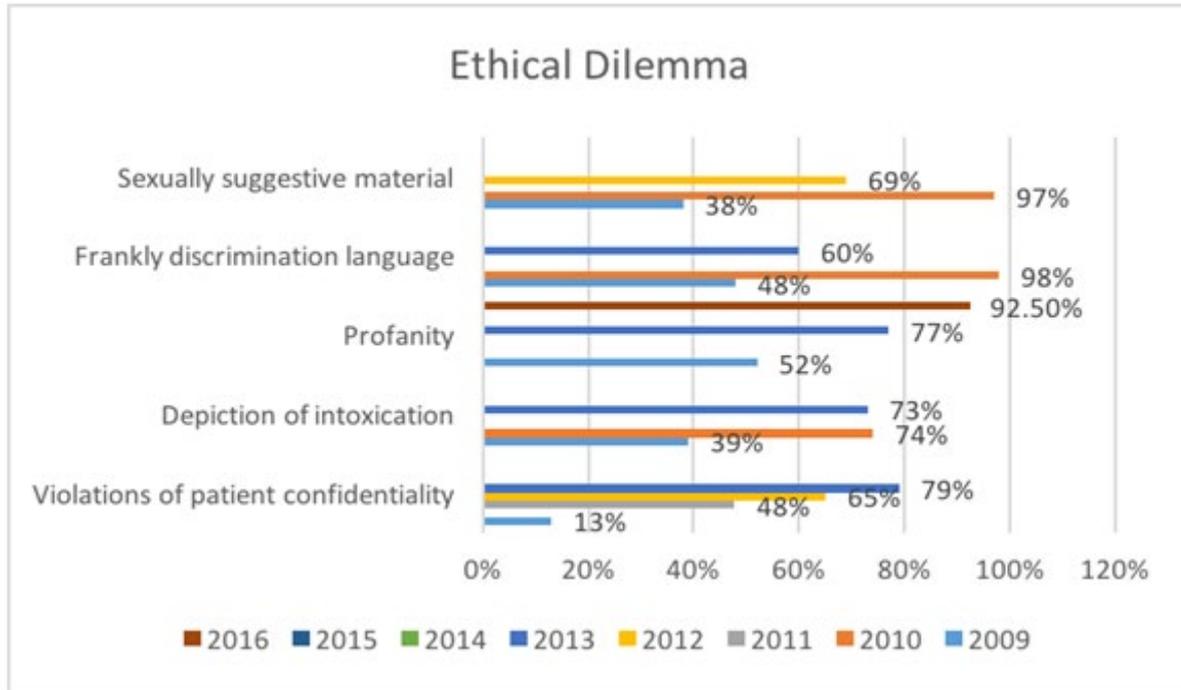
Ethics is a branch of philosophy that is part of the morality study. The morality study is part of human conduct and human values about what is good, bad, right or wrong (Thiroux & Krasemann, 2012). According to Herbert Spencer (1898), ethics is the science of good living from an objective perspective (Ross, 1939). The researcher could conclude that ethics is the branch of philosophy that explores rationally the conduct of human character and human values. Human character and human values are part of identifying human morality of good, bad, right and wrong. Those values could namely be ethical values.

Ethical value is “the value which belongs to objects or part of the object in the ethical consciousness”. Ethical consciousness is part of human conduct as agent approval or disapproval (Tufts, 1908).

Based on the ethical dilemma in social media as mentioned in figure 1.0, the unethical healthcare interaction happened on several viewpoints. There is a violation of patient confidentiality, depiction of intoxication, profanity, frankly discriminatory language, and sexually suggestive material. The violation of patient confidentiality was growing from 13% (2009) to 79% (2013). This viewpoint was growing each year as an action by the physician in social media. At the same time so did the function of physician and medical students on the

depiction of intoxication and profanity (Chretien et al., 2009; Fisher & Clayton, 2012; Greysen et al., 2012, 2013; Kind et al., 2012; Kitsis et al., 2016).

Figure 1. Ethical Dilemma in Social Media



Synthesising Existing Ethical Framework

The researcher did a search strategy and selection criteria analysis on PubMed and IEEE from the year 2010 to February 2016. The search strategy to PubMed found 38 journals related based on words searching to the ethical framework on healthcare and ethical framework on social media. The selection criteria reviewed all abstracts and found 2 journals with the exact ethical framework on healthcare. There is a framework on online social media interaction (Chretien & Kind, 2013), and a framework on learning the healthcare system (Faden et al., 2013).

At the same time, the search strategy to IEEE found 16 journals based on words searching for the ethical framework on social media. The selection criteria reviewed the abstracts and found 1 journal with the exact framework for evaluating online information disclosure (Schaupp, Carter, Schaupp, & a, 2011). Those frameworks have been synthesised and identified the attribute of ethics (Table 2). Chretien & Kind (2013) introduces the American medical association (AMA) as a framework of medical ethics in social media which describes the ethical dilemma of patient and physician interaction on social media. Faden et.al. (2013), introduced the ethical framework on learning the healthcare system. This

framework supported the learning transformation to the healthcare system on ethical conduct. Schaupp et.al. (2011), explained the framework to evaluate online information in social networking. The ethical implication on information disclosure was discussed.

Table 2: Existing Ethical Framework

	Ethical Issues	Sub Issues	Attributes
Chretien & Kind (2013)	Uphold Professionalism Standards	Show the Competency and Integrity	Competency, Integrity
		Placing patient's interest as the priority	Interest as the priority
		Providing expert advice to society on the matters of health	Advice
	Show professional honesty in all interactions	Physicians must get clear and honest information from patients before and after treatment	Clear Information, Treatment, Patient Information, Honest information
		Getting benefit (fees) from social media promotion of any product or taking pay an advertisement on the blog or another website	Benefit
	Unprofessional Character of Physician	Incorrect content in social media, it may harm the patients (false advertising claims, credentials misrepresentation, posting incorrect content)	Refrain from Harm
	Safeguard patient confidences and privacy within the constraints of the law	Direct communication with patients	Communication
		Writing patients' information on social media (informed concern, deidentification)	Safeguard, Patient information, informed concern, deidentification
		Looking up information about patients on the internet	Looking up information
	Provide relevant information available to patients, colleagues, and the public	Sharing credible health information and patient education	Sharing Information, patient education
Physician rating sites		Skills	
Responsibility to the patient as paramount	Trust and social media relationships between physicians	Relationship	

		and patients	
		Establishing patient-physician relationships using social media	
		Online friendships with patients on social networking sites	
		Commercial interest and patient exploitation	Commercial Interest, Patient exploitation
Faden et al, 2013	To respect the rights and dignity of patients		Respect
	To respect the clinical result and judgment of clinicians		Clinical result, clinician judgment
	To provide optimal care to each patient		Optimal care
	To avoid imposing nonclinical risks and burdens on patients		Avoid risk and burdens
	To reduce health inequalities among populations		Inequalities
	To conduct responsible activities that foster learning from clinical care and clinical information		Responsibility
	To contribute to the common purpose of improving the quality and value of clinical care and health care system		Improving quality
Schaupp et al. 2011	Empirical definition of the Situation	Threats in posting personal information	Threats, Personal Information
		Perceived risk (friend or not)	Perceived Risk
	Mode of Moral Reasoning	A moral action must be universal	Action
		The action to be moral if treated persons with their satisfaction	Action, Treats
	Centre of Values or loyalties	Willingness to accept anyone as a friend	Willingness, Accepting anyone
	Ground of meaning or Theology	To post private information	Private information
To act in one's best interest		Interest	

Identify Ethical Value

Ethical value being identified is based on its attributes as mentioned in table 5. Those attributes will be clustering in the same meaning and function into ethical value. There are six ethical values identified as mentioned in Table 3. Those ethical values are interaction, integrity, confidentiality, protection, caring, and fairness.

Table 3: Interrelated analysis between ethical value and the attributes

Ethical Value	Attributes
<p><u>Interaction:</u> According to the Oxford dictionary, interaction is “reciprocal action or influence” (Hornby, 2005). The researcher could conclude based on healthcare views that interaction is the value of communication of interpersonal interaction between the patient and physician. Meaning that patients when communicating with the physician will provide honest information on their disease.</p>	<p><u>Communication:</u> Communication is “the activity or process of expressing ideas and feelings or of giving people information” (Hornby, 2005). Or in healthcare views, communication is the way of patient to convey a problem to the physician and vice versa.</p> <p><u>Sharing Information:</u> Sharing information is the process of the physician to deliver medical information to public or patient (Chretien & Kind, 2013). The physician shares information on any disease prevention to help the patient to identify beneficial information.</p>
<p><u>Integrity:</u> According to the Oxford dictionary, integrity is “the quality of being honest and having strong moral principles”(Hornby, 2005). Beauchamp & Childress defined moral integrity as “soundness, reliability, wholeness, and integration of moral character” or “fidelity in adherence to moral norms”(Beauchamp & Childress, 2009).</p>	<p><u>Patient interest as the priority</u> The patient is most important object in the healthcare world. They put the patient as the highest priority to compare with the physician (Chretien & Kind, 2013). <i>Patient interest as the priority</i> is the professional integrity of the physician to put the priority on the patient (Beauchamp & Childress, 2009).</p> <p><u>Expert Advice</u> Expert advice is a physician’s capabilities on explaining healthcare matters to society. It is part of the trust given to the physician or any healthcare professional (Chretien & Kind, 2013). The patient will respect the advice of the physician on the treatment given based on the honesty and integrity of the physician.</p> <p><u>Honest Information</u> The physician should be honest to all his/her patients/society in relation to fees, promotion of any product, and any conflict of interest (Chretien & Kind, 2013).</p> <p><u>Respect</u> Respect is part of respect for a person which is as a basic of moral norm (Beauchamp & Childress, 2009). Respect of person or patient is part of the physician’s integrity on putting their trust in them.</p> <p><u>Responsibility</u></p>

	<p>The physician’s responsibility is to educate the patient through the healthcare system on a particular disease or treatment (Chretien & Kind, 2013; Faden et al., 2013). This responsibility is part of the physician’s integrity to educate the public.</p>
	<p><u>Improving Quality</u> To maintain the quality of clinical care and the healthcare system to the patient(Faden et al., 2013). Improving the quality of clinical care requires professional integrity of the physician.</p>
	<p><u>Clinician Judgment:</u> Clinician judgment is the best of a clinician outcome on patient health interest (Faden et al., 2013). The clinician judgment is part of profession integrity (Beauchamp & Childress, 2009).</p>
<p><u>Confidentiality:</u> Confidentiality is the obligations of persons who receive information in the context of an intimate relationship which is to respect the privacy interests of the person’s related data and to keep information safe (Nass & Levit, L. A. Gostin, 2009).</p>	<p><u>Informed consent:</u> Informed consent is the consent of a person to undertake a medical procedure or any other information (“Medical Dictionary,” n.d.). To get any particular person’s identification, health data required informed consent from that person (Nass & Levit, L. A. Gostin, 2009).</p>
	<p><u>Anonymity</u> One of the states of privacy is anonymity. Anonymity is defined as “<i>the condition of being unknown and free from identification</i>”(Rizza et al., 2011), meaning that an unknown person is accessing a system without any identification. According to Singh, Ng, Yap, Husin, & Malim, (2017), user anonymity is “<i>a privacy issue related to user authenticity in social networks</i>”. Meaning that users are able to create multiple accounts by hiding their identity.</p>
	<p><u>Clinical Result</u> The clinical result is the diagnosis data or historical data of a patient based on the examination process (Faden et al., 2013). So, the clinical result is part of the patient privacy data. The physician is not supposed to share a patient’s</p>

	<p>clinical result to others without patient consent.</p> <p><u>De-identification</u> De-identification is a process of removing identifiers from health information and mitigating privacy risks to individuals(US-HHS, 2015).</p> <p><u>Look up information</u> To look up information is to find information on a particular patient treatment on the internet. It is part of the patient’s privacy that is openly accessed in the public environment. It will create violation and a compromise of trust.(Chretien & Kind, 2013).</p>
<p><u>Protection:</u> Protection is “the act of protecting somebody/something; the state of being protected” or “keep safe from harm or injury”(Hornby, 2005). According to Nemati, the ethical uses of information and the system need to secure the information and the system. Those unethical users could be hacking, practising fraud, sabotage, and giving harmful information. Moreover, personal data should be protected with a good safeguard system for risk of loss, unauthorised access, destruction, modification or disclosure of data (Nemati, 2007).</p>	<p><u>Refrain from Harm</u> Harmful is “causing damage or injury to somebody/something”(Hornby, 2005). Refraining from harm is abstaining from doing harm to others. The practice of this value is dominantly caused by physical interaction between the physician and patient. The physician should think twice whether their action will cause harm intentionally or not intentionally (Beauchamp & Childress, 2009). Therefore, harmful can be mentioned as the condition of causing harm to other people such as posting unprofessional content.</p> <p><u>Safeguard</u> Safeguard is the system that uses a secure closed system with data encryption (Chretien & Kind, 2013).</p>
<p><u>Caring:</u> Caring is “<i>emotional commitment to, and deep willingness to act on behalf of persons with whom one has a significant relationship</i>” (Beauchamp & Childress, 2009). The researcher could conclude that caring is the quality of care by the physician to the patient either by direct interaction or an online approach.</p>	<p><u>Engagement</u> Engagement is the way of the physician or media to approach the patient (Chretien & Kind, 2013).</p> <p><u>Optimal care</u> Optimal care is the maximum effort of the physician to take care of the patient until a clinical result/outcome appears (Faden et al., 2013).</p>
<p><u>Fairness:</u></p>	<p><u>Inequalities</u></p>

<p>According to Cambridge dictionary, fairness is the quality of treating people equally or in a way that is right or reasonable (“Cambridge Dictionary,” n.d.).</p>	<p>Inequalities is incomplete medical evidence for the physician’s decision on patient treatment (Faden et al., 2013).</p>
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Research Methods

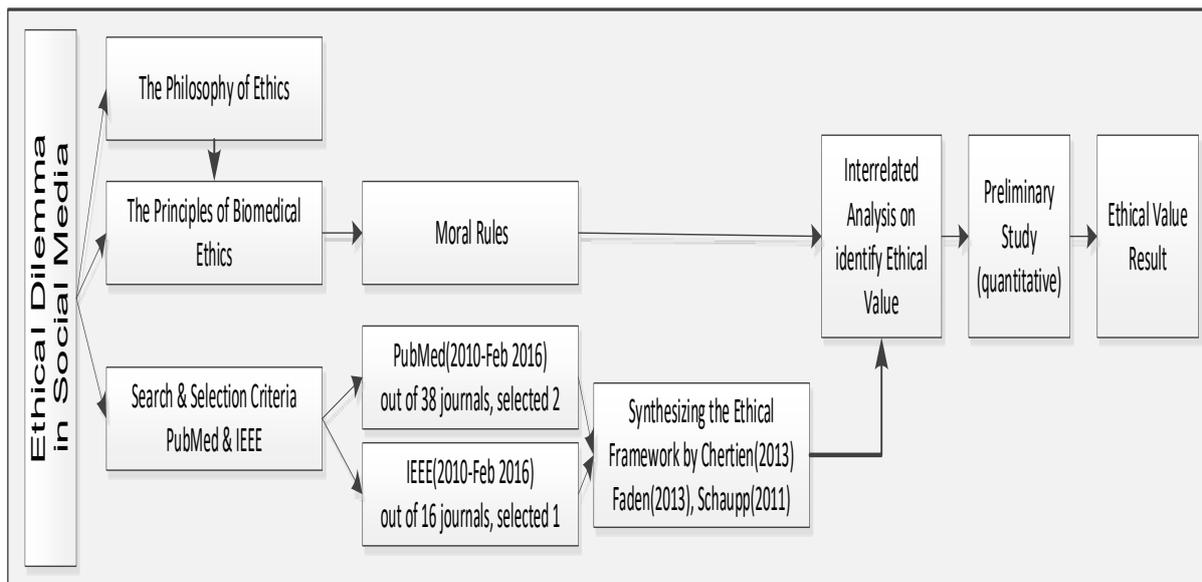
This is a preliminary study on quantitative approaches based on a questionnaire to get an investigation on the awareness of the ethical value in social media and the survey, to identify the ethical value from the existing ethical framework.

The survey was done to get the opinions of the public, nurses, and doctors on ethical awareness of the healthcare system in social media. The survey was done in Jakarta city and Tangerang city (Indonesia) and the questionnaire was done in two languages (Indonesian and English).

Research Flow

The flow of this research as mentioned in figure 2, It explains the research problem on ethical dilemmas in social media. And the theory of ethics will support the definition of ethical value. The search strategy and selection criteria uses PubMed and IEEE to find the journal papers on the ethical framework.

Figure 2. Ethical Dilemma in Social Media



Synthesising the ethical framework is the result of the collection of ethics attributes from every framework. Those attributes came from the ethics issues on the framework. This study is a preliminary study under a quantitative approach. Finally, the respondent provides the result of the ethical value.

Sampling and Participants

The questionnaire was distributed to the doctors, nurses, and the public (students and lecturer) as the participants. The participants were taken from two hospitals and one university. The participants should be 18 years and above and came from a different background. The questionnaire emphasises the investigation of ethical awareness in social media. It also focused on demographic information, social media usage, and ethical awareness.

Data Collection

The survey was done for two months (February- March 2017) and distributed 200 questionnaires to two hospitals (50 questionnaires each) and to a university (100 questionnaires). Out of 200 questionnaires distributed, only 162 questionnaires were returned. Out of 162 questionnaires, there were 33 invalid and 129 questionnaires were valid respondents.

Results and Discussion

The instrument has been designed for ordinal scale data type and the statistical analysis has been done through SPSS 16.0 for 129 respondents. Out of 30 attributes of ethical value, there were 11 outliers with negative correlation and the valid correlation were 19 (nineteen) attributes.

Reliability Analysis

The analysis was done through frequency analysis on nominal and interval data. The result of reliability analysis (Cronbach Alpha) was shown the coefficient value $0.887 > 0.8$ (Goforth, 2015) and the inter-item correlation matrix has shown no negative values. Meaning that the instrument being used in this research is reliable.

The frequency analysis was executed through SPSS version 16.0 for 129 valid data of respondents. Out of 129 respondents, there were 18 doctors, 33 nurses, and 78 public (students and lecturers). The respondents were divided into 49 males and 80 females. The dominant age of respondents between 18 to 24 years was 56.6%. And the respondents

predominantly completed high school (47.3%). The demographics of participants is shown in Table 4.

Table 4: Participant Demographics

Demographic	Category	Count (N=129)	(%)
Gender	Male	49	38
	Female	80	62
Age	18-24	73	56.6
	25-34	30	23.3
	35-44	17	13.3
	45-54	7	5.4
	55-64	2	1.6
Completed Education	Elementary School	1	0.8
	Secondary Education/High School	61	47.3
	Certificate/Diploma	28	21.7
	Bachelor Degree	24	18.6
	Master Degree	14	10.9
	Ph.D. or equivalence	1	0.8
Social Media Usage	Facebook	74	
	Twitter	24	
	WhatsApp	90	
	Video sites (eq. YouTube)	33	
	Instagram	81	
	Others (Line, Path)	18	

Correlations Test Analysis

The data is normally distributed based on Kolmogorov-Smirnov significance value which is 0.2, Shapiro-Wilk significance value is 0.3 and the significance values <0.05 (Pallant, 2010, p.59). The test was based on bivariate correlation on Pearson correlation coefficients with the significance value <0.01. As a result, only 19 (nineteen) attributes will be representing the indicators of ethical value (Table 5).

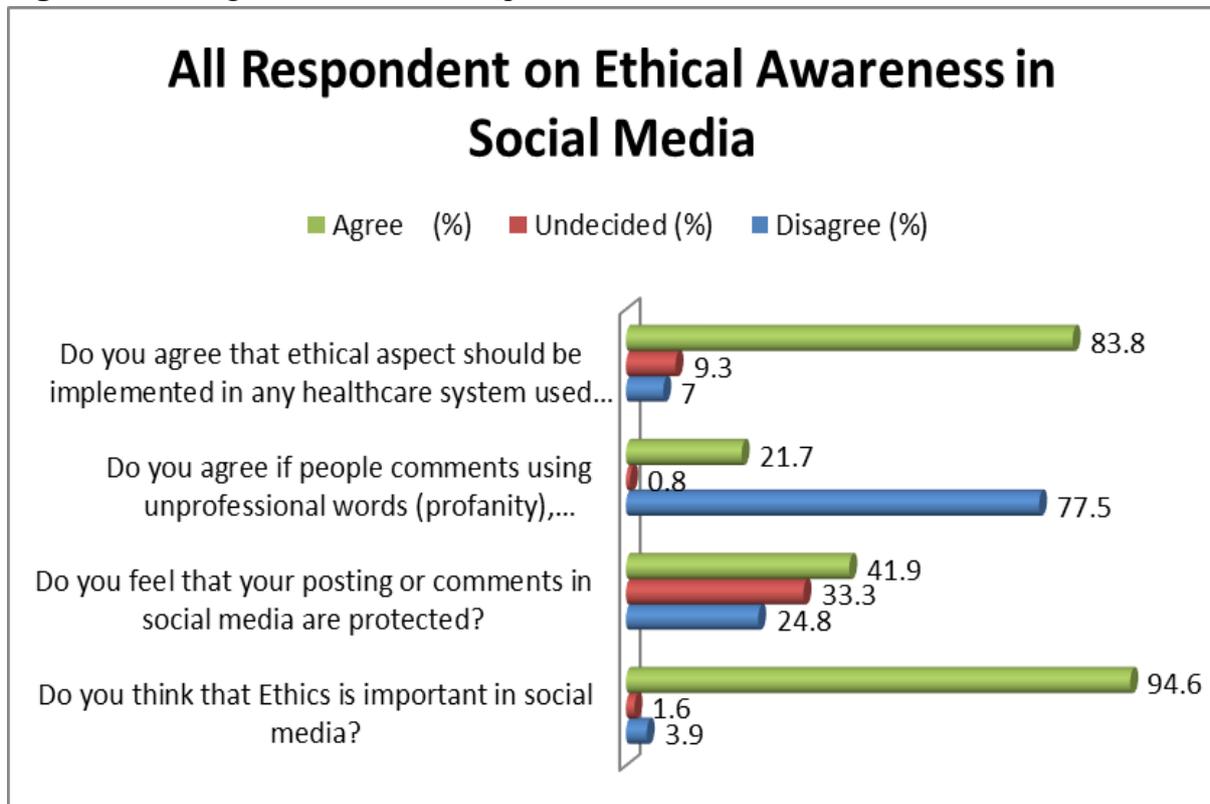
Table 5: Pearson correlation test on ethical value

No.	Attributes	Significance
1	Communication	0.00
2	Sharing Information	0.00
3	Clinician judgment	0.00
4	Informed Consent	0.00
5	Patient Interest as the Priority	0.00
6	Expert Advice	0.00
7	Honest Information	0.00
8	Respect	0.00
9	Anonymity	0.00
10	Responsibility	0.00
11	Improving quality	0.00
12	Clinical Result	0.00
13	Refrain harm	0.00
14	De-identification	0.03
15	Safeguard	0.00
16	Look up information	0.00
17	Engagement	0.00
18	Optimal Care	0.00
19	Inequalities	0.00

Based on figure 1, all of the respondents said they had heard about ethics (99.2%) and agreed that ethics is important in social media (94.46%). On the question of is every posting in social media protected? 41.9% agreed, 33.3% were undecided, and 24.8% disagreed. Meaning that everyone is unclear on whether social media is being protected or not.

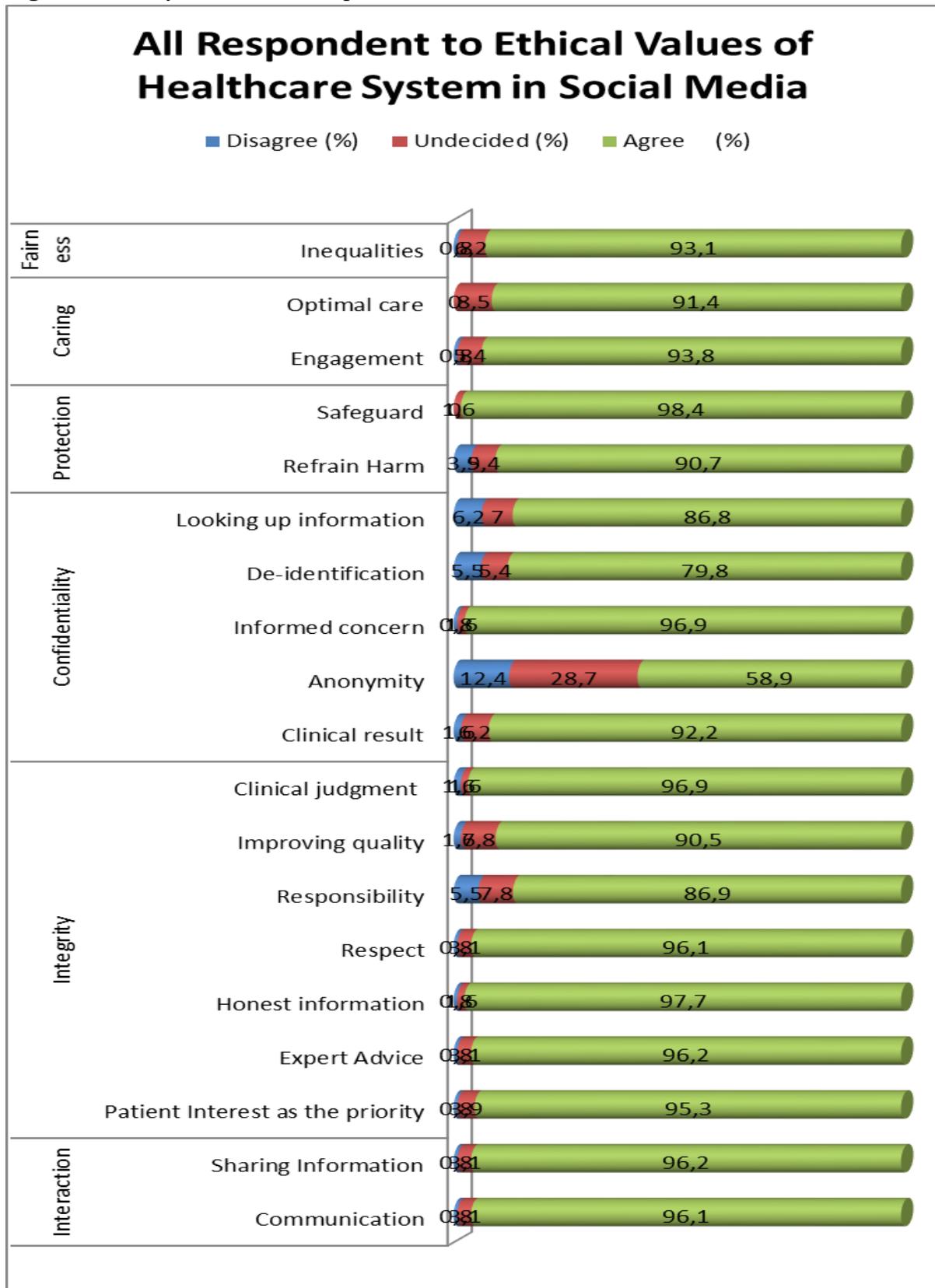
Subsequently, based on figure 3, most of the respondents disagreed (77.5%) with comments on social media using profanity, discrimination words or sexually explicit post. And 83.8% of respondents agreed that ethics must be implemented in any healthcare system in social media.

Figure 3. Investigation result to all respondents on ethical awareness in social media



Based on figure 4, all of the respondents showed a significance mean frequency of Agree that ethical values should be implemented in the healthcare system (91.88%). Therefore, ethical value are able to be applied into the healthcare system.

Figure 4. Survey results of all respondents to ethical values in social media





Conclusions

The users of social media have risen as an important aspect in our life (each respondent at least used one active form of social media). And every respondent also agreed (94.6%) to implementing ethics in social media. The ethical value also could be applied to the healthcare system (83.8%). However, most of the respondents didn't understand that social media is not protected. Finally, the respondents agreed (91.88%) to applied ethical values into any healthcare system.

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