



Factors Affecting the Communication Skills Among the Medical Imaging Undergraduate Students at The International Islamic University Malaysia (IIUM) Kuantan, Pahang

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Abstract:

Background: Communication skill is one of the skills that students should equipped themselves for the job market and creating positive effects on patients leading to better patient care. This study was conducted to ascertain factors that affect the communication skills among the Medical Imaging undergraduate students of IIUM Kuantan. **Methodology:** One hundred Medical Imaging undergraduate students from the first year to the fourth year were randomly selected as respondents. Data was collected using a self-developed questionnaire that had undergone reliability and content validation. The data was analyzed using the Statistical Package for Social Science (SPSS) Version 26. **Results:** The Chi-Square test indicated anxiety, lack of confidence, speech impairment, poor language command and lack of practice are the associated factors that affect the respondents' communication skills. **Discussion:** The respondents' communication skills were influenced by anxiety and confidence especially during job interview which then affect their ability to communicate effectively and assertively. Poor language command was also found to influence the individual to be an effective communicator. Lack of practice in communication skills could introduce conflicts due to usage of inappropriate conversation in different situations. **Conclusion:** University students should efficaciously combat the factors that affect communication skills delineated in this study, so as to communicate effectively for the job interview and ensuring effective job performance.

Keywords: Communication skills, Medical Imaging, university student, job market



Introduction:

The communication process in a human's life is a crucial perceived entity that influences human development and can reflect an individual's weakness. Establishing an appropriate relationship via communication is one of the necessary social and life skills in an individual. Communication skill is one of the skills that students should equipped themselves for the job market after graduating. Most fresh graduates experience difficulties during job interviews because they do not possess good communication skills and they could not speak fluently (Skarbalienė et al., 2019). Besides, upon obtaining the job, they are hardly promoted to a higher post due to poor communication skills (Reh, 2019). Amongst the compounding factors are the lack of practice, poor reading habits, poor vocabulary and rote learning (Palpanadan and Ahmad, 2018). In addition to that, poor command of the language, socioeconomic status and parental education were found to be part of the influencing factors (Suprabha and Subramonian, 2020). Hence, factors that influence the communication skills amongst the university students need to be ascertained in order to prepare them for the job market as well as in ensuring patients satisfaction from the services rendered.

Many experts believed that the ability to establish accurate communication is one of the most important characteristics that should be acquired by any healthcare personnel (Chichirez and Purcărea, 2018).

This is to avoid the misconception that could lead to errors in diagnosis, reduction of patient participation in treatment and reduction in the amount of information received from patients. As such, healthcare staff are required to communicate appropriately in order to bring positive effects such as relieving pain and anxiety among the patients.. This can also lead to patient's satisfaction and eventually promote positive health outcomes. A study done in a radiology department in the United States found that communication errors were the major problems encountered that affects patient care (Siewert et al., 2016). Another study conducted at a diagnostic imaging department in Western Australia found that patients' complains were mainly due to radiographers' lack of communication skills such as poor explanations, non-verbal approaches and inattentive listeners (Van den Berg et al., 2019). In view of the above, this study aims to evaluate the factors affecting communication skills among the

Medical Imaging undergraduate students at IIUM Kuantan.

Materials and Methods:

A set of questions in English consisted of three sections were developed. The variables used in this study included the demographic characteristics. The outcome variables were communication skills self-assessment and factors that affect the communication skills. The questionnaire was first reviewed for content validity by experienced academicians. A pilot study was conducted using the Google Form on 55 undergraduates of the Kulliyyah of Allied Health Science (KAHS), IIUM Kuantan. The pilot study result has led to the restructuring of some questionnaire items. The internal consistency of the questionnaire was tested by performing Cronbach's alpha test and the value obtained was more than 0.8. The study was approved by the Kulliyyah Postgraduate and Research Committee (KPGRC, KAHS 14/21) and IIUM Research Ethics Committee (IREC). For the actual study, the questionnaire was given personally to the undergraduate students undertaking the Medical Imaging programme at KAHS to avoid non-responses from them. Besides, the participant's willingness to participate in the survey was deemed as granting of consent.

Statistical Analysis

The obtained data was coded to the SPSS version 26 for analysis. Descriptive analysis was utilized to summarize the respondents' sociodemographic characteristics and the level of respondents' communication skills. The communication skills levels were categorized into three groups, "poor communication skills" for the mean range between 1 to 3.9, "moderate communication skills" for the mean range between 4 to 6.9 and "good communication skills" for the mean range between 7 to 10. Meanwhile, the Chi-Square test was used to ascertain the factors that influence the respondents' communication skills. The significance level was set at a p-value less than 0.05 ($p < 0.05$).

Results:

One hundred respondents answered the questionnaire and the respondents' sociodemographic characteristic is summarized in Table 1.

Table 1 Respondents' Sociodemographic Characteristics

Item	Characteristics	Per cent
Gender	Male	22%
	Female	78%
Age	19	26%
	20	21%
	21	19%
	22	15%
	23	18%
	26	1%
Year of Study	Year 1	30%
	Year 2	19%
	Year 3	25%
	Year 4	26%
Speech Impairment Status	Yes	4%
	No	96%
Father's education	No formal education	1%
	Primary education	3%
	Secondary education	9%
	Tertiary education	87%
Mother's education	No formal education	1%
	Primary education	2%
	Secondary education	14%
	Tertiary education	82%
	Unsure	1%

The verbal communication skills of the respondents were relatively good. The highest mean value was "I think about what the person needs to know and how best to convey it before communicating" (8.71) and followed by "I end the conversation politely" (8.42). The lowest mean value (7.28) were "I use any written medium to communicate complex issues with people

as it is quick and efficient" and "I am comfortable in conversing with different types of people." The results were considered acceptable as the value is within the range of 7 to 10. The mean score of each item is obtained to ascertain the level of respondents' verbal communication skills (Table 2).

Table 2 Verbal Communication Assessment of the Respondents

No.	Item	Mean
1.	I think about what the person needs to know and how best to convey it before communicating.	8.71
2.	I pronounce words clearly so that the receiver understands the first time around.	7.81
3.	I choose proper sentences when I communicate so that the receiver understands the first time around.	8.05
4.	I speak at an appropriate volume level.	7.80
5.	I communicate with a varied tone (volume and pitch of voice appropriate during the conversation).	8.00
6.	I use open questions to find out facts.	7.63
7.	I ask the right questions to gain a complete understanding of people's problems.	7.72
8.	I summarize the thoughts of others to ensure understanding.	8.04
9.	I speak correctly about my own opinion or situation.	7.72
10.	I discuss with others so that I will be careful to understand and agree to their needs fully.	8.25
11.	I vary my communication style to fit in with different cultures.	7.96

12	I am comfortable conversing with different types of people.	7.28
13	I find out the thoughts and views of others using open questions.	8.07
14	I do not continue the conversation when others are speaking to me.	7.35
15	I negotiate with other people who have different opinions on the topic of the conversation.	7.84
16	I avoid the use of jargon and technical language.	7.32
17	I correct the misinterpretations of other people to avoid misunderstanding.	8.16
18	I give feedback when communicating with people.	7.35
19	I end the conversation politely.	8.42
20	I use any written medium to communicate complex issues with people as it is quick and efficient.	7.28

The non-verbal communication skills of the respondents were relatively good. The highest mean value was “I show respect to other people when communicating” (8.74) and followed by “When communicating with others, I pay attention to their non-verbal signals (8.63). “While speaking, I do not practice involuntary movements like tapping feet,

touching my hair or nose” has the lowest mean value (6.64), followed by the mean value (7.69) for “I practice appropriate eye contact when I speak to people”. The mean score of each item in this section is obtained to ascertain the level of respondents’ non-verbal communication skills (Table 3).

Table 3 Non-Verbal Communication Assessment of the Respondents

No.	Item	Mean
1.	When communicating with others, I pay attention to their non-verbal signals.	8.63
2.	I practice appropriate eye contact when I speak to people.	7.69
3.	I use easily understood body gestures that everyone is familiar.	8.01
4.	I use appropriate facial expressions so that the receiver understands what I am saying.	8.12
5.	While speaking, I do not practice involuntary movements like tapping feet, touching my hair or nose.	6.64
6.	I am careful about my postures during an informal conversation.	8.09
7.	I vary my body language to gain rapport with people.	7.72
8.	I show enthusiasm when communicating.	7.71
9.	I listen attentively, such as pay attention to what the other person is saying and clarify points to know what he/she has said correctly.	8.30
10.	I am silent rather than interrupting when listening to others.	8.18
11.	I am aware of the effects of my behaviour on others.	8.51
12.	I show empathy and care for others when communicating.	8.42
13.	I show respect to other people when communicating.	8.74
14.	I express positive feelings to others when communicating.	8.61

Figure 1 summarizes the respondents’ total mean scores for both verbal and non-verbal communication skills assessment. Overall, 75% of the respondents

have good communication skills, while 25% have moderate communication skills.

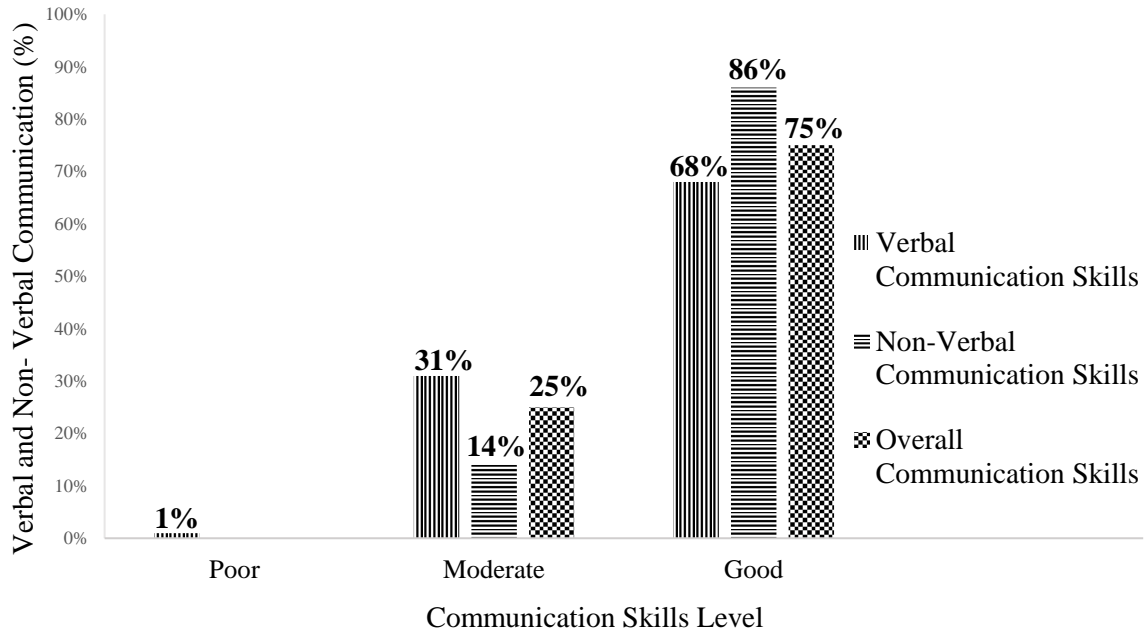


Figure 1 Verbal and Non-Verbal Communication Skills among Respondents

Before deciding whether the parametric or non-parametric analysis is to be used, the normality test was carried out using the Kolmogorov-Smirnov test. A p-value of <0.05 was obtained, indicating that the data was not normally distributed.

strongly agreed that the lack of confidence and anxiety (73%) affects their communication skills. However, a small number of respondents (16%) strongly disagreed that parental education and cultural differences (13%) affect communication skills (Table 4).

This study found that most respondents (76%)

Table 4 Factors that Affect Respondents' Communication Skills

No.	Item	No of Respondents (%)				
		1	2	3	4	5
1.	Do you agree, shyness affects communication skills?	-	2	6	20	72
2.	Do you agree, anxiety affects communication skills?	1	-	4	22	73
3.	Do you agree, lack of language commands affects communication skills?	-	7	8	31	54
4.	Do you agree, poor reading habits on specific topics affect communication skills?	2	5	12	27	54
5.	Do you agree, lack of confidence affects communication skills?	-	1	4	19	76
6.	Do you agree, cultural differences affect communication skills?	2	13	6	30	49
7.	Do you agree, the interpersonal problem such as have bad experiences with people affects communication skills?	-	1	7	38	54
8.	Do you agree, lack of practice in communication affects communication skills?	-	4	7	31	58
9.	Do you agree, lack of peers to practice communication affects	-	5	15	32	48

communication skills?

10	Do you agree, having speech impairment such as stuttering and voice disorder affects communication skills?	1	5	10	33	51
11	Do you agree, timing or length of communication affects communication skills?	2	5	16	34	43
12	Do you agree, the socioeconomic difference between individuals affects communication skills?	6	12	6	50	26
13	Do you agree, parental education affects communication skills?	16	9	10	29	36

(5= Very Agree, 4= Agree, 3= Unsure, 2= Disagree, 1= Very Disagree)

To aid in the discussion, the relationship between factors that affect communication skills and the respondents' level of communication skills, a Chi-Square test was carried out. From the test, Cramer's

V values of more than 0.20 were retained to show the correlation between the factors and respondents' communication skills (Table 5).

Table 5 Correlation between the Respondents' Factors that Influence Communication Skills with Communication Skills Level

Factors	Cramer's V value
Anxiety	0.24
Lack of confidence	0.24
Speech impairment such as "stuttering" and voice disorder	0.24
Lack of language commands such as poor vocabulary or grammar	0.26
Lack practice in communication	0.34

Discussion:

The findings of this study indicated that more than 50% of the respondents have good communication skills. The reason can be expected because communication is a significant part of a daily life as it is needed in social interaction to gain information, share thoughts, or socializing with others (Akçay, 2017; Aruma, 2018). Many university courses have participation that is formally graded. As such, university students are compelled to ensure they score well in this component, such as interactions with lecturers and peers, discussing the planned essay or how they phrase the email to request for an extension. Nevertheless, the probable reason why less than 50% of the respondents have moderate communication skills could be that they did not address their language or speech difficulties, which lead to moderate communication skills. Studies also suggested that personality differences and peer pressure could contribute to these moderate communication skills (Othman et al., 2018).

This study found that a couple of associated factors affect the respondents' communication skills. The first significant factor that has been identified in the study that affects communication skills is anxiety. It is a common phenomenon for a job applicant to be anxious. It then can affect their job interview performance and the outcome is most prevalent when there are many applicants for a few positions between getting a job and not getting one (Tran, 2016). The most common anxiety cues amongst job applicants are voice quality, such as shaky and quiet voice, which resulted in them not answering the questions effectively (Schneider, et al., 2019).

Lack of confidence also can affect an individual's ability to communicate with others and result in ineffective communication. Elements such as shyness, low self-worth can hinder an individual from reflecting his/her ability on his/her needs and opinions (Kamaruddin, 2017). A lack of confidence makes it challenging to communicate assertively as it can result in the individual using qualifying words such as kind of and sort of, which minimize effective

communication (Schneider, et al., 2019). The individual's discomfort with assertive communication can lead him/her to talk too much without making strong statements instead of remaining quiet and waiting for feedback from others (Goman, 2016). Thus, this lack of conviction can result in others questioning the individual's thinking and perceive that individual as a not valued contributor.

Another attribute that can have an impact on the communication skills is speech impairment. An individual with speech impairment might not develop normal communication skills due to his/her disability to receive and respond to the sender's message (Kamaruddin, 2017). An individual with speech impairment will have difficulty following multiple instructions. Moreover, having speech impairment could result in the individual using the wrong choice of words that can lead to misunderstanding, lack of fluency and probably unconscious of the errors he/she makes during the conversation (Schneider, et al., 2019). Hence, an individual with speech impairment will feel ashamed and frustrated, thereby avoiding any communication with others.

The other associated factor influencing respondents' communication skills is a lack of language commands such as poor vocabulary and grammar. Language command is vital for an individual to express his/her feelings or idea without grammatical errors. The individual with poor language tends to use inappropriate words when talking and make others perceive him/her as an ineffective communicator (Kamaruddin, 2017). In a job interview, most interviewers conduct the interviews in English language (Tran, 2016; Schneider, et al., 2019). A good English command candidate can leave a good impression and have a higher chance of getting the applied position as he/she able to express his/her opinion or ideas assertively (Tujuba and Davidson, 2017). However, studies showed that one of the job employability barriers is poor English command amongst the candidates (Nesaratnam, 2020).

This study also found that the other factor affecting communication skills is a lack of practice in communicating effectively. The individuals with a lack of communication skills might introduce conflict as he/she does not know how to use proper communication skills based on different situations. For instance, a healthcare provider with a lack of communication skills can negatively affect patient care when he/she uses medical jargon to communicate (Skarbalienė, et al., 2019). The individuals with lack of communication practice will

probably feel nervous as he/she is afraid to make errors when communicating with others (Raja, 2017). As a result, he/she will portray poor communication skills due to the "clouded" negative thoughts (Thomas, et al., 2017).

Conclusion:

The majority of respondents have good communication skills as they are compelled to ensure they communicate well with their lecturers and peers. The findings of the study indicated that respondents' communication skills are influenced by anxiety, lack of confidence, speech impairment, poor language command and lack of practice in communicating effectively. Hence, it is suggested that university students should continuously improve their communication skills to combat the factors that affect communication skills delineated in this study to prepare them for the job market and to communicate effectively whilst on the job in ensuring effective job performance and patients' satisfaction.

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