

JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH

How to cite this article:

KHAN T M,EJAZ M A,AZMI S.EVALUATION OF COMMUNICATION APPREHENSION AMONG FIRST YEAR AND FINAL YEAR PHARMACY UNDERGRADUATES. Journal of Clinical and Diagnostic Research [serial online] 2009 December [cited: 2009 December 7]; 3:1885-1890.

Available from

http://www.jcdr.net/back_issues.asp?issn=0973-709x&year=2009&month=December &volume=3&issue=6&page=1885-1890 &id=510

ORIGINAL ARTICLE

Evaluation Of Communication Apprehension Among First Year And Final Year Pharmacy Undergraduates

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ABSTRACT

The goal of the present study was to assess and compare the level of communication apprehension (CA) among pharmacy undergraduates. To accomplish this aim, a modified version of Zimbardo's scale was used. A total of 268 pharmacy students showed participation in this study. A higher participation was observed in respondents in the age group of 21-25 years. Our findings demonstrated a high level of CA among first year pharmacy students. Overall, it was seen that Chinese female students were at a high risk of CA. Race, age, gender and year of study were found to be the factors associated with CA.

Key Words: Communication apprehension, pharmacy undergraduates

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Introduction

One can share their thoughts and ideas in an affective way only if they have good communication skills [4]. In general, communication among individuals takes place either intentionally or unintentionally in verbal or non-verbal ways [2]. According to Berko et al., 1992, one spends 42% of the time of communication as a listener and 40% of the communication time is spent in speaking. However, about 15 % of the time is spent in reading and 1% is spent in writing [2].

In the current scenario, good communication skills are counted as one of the essential assets of a professional. Different professions have different communication level demands. However, for pharmacists, effective communication skills are the most vital part of their practice [1]. Whilst fulfilling the job demands, pharmacists interact with different individuals like patients, their family members, medical staff and other pharmacists. In pharmacy, practice effective patient care is one of the milestones that every pharmacist wants to achieve; this is possible only if the pharmacist has good communication skills. It is observed that in some cases effective communication is hindered due to the shyness or lack of confidence of the pharmacist to communicate. In other words, **Communication Apprehension (CA)** on the part of the pharmacist acts as a barrier to effective communication [1]. According to Baldwin et al. 1979, Communication Apprehension can be a possible factor for a pharmacist that result in avoiding patient communication or counseling and discussion forums with professional peers [1].

CA is defined as "The level of fear or anxiety associated with either real or

anticipated communication with another person or a group of persons"[12]. There are two types of CA; writing apprehension and oral CA [5]. Among all types, oral CA is considered to be the most important aspect of communication and it happens due to an intense personal fear or anxiety about communicating [9],[15]. In other words, oral CA is the lack of capability to communicate verbally with people, which afterwards results in an ineffective communication.

Zimbardo, 1977, has associated CA with shyness. Shyness is the lack of tendency to talk and engage in communication with others [16]. According to McCroskey and Richmond, (1980), shyness can result in oral CA and lack of verbal skills [7], [8], [11]. This can be reduced by means of cognitive intercession to ensure better quality future professionals [11]. Cognitive intercession strategies consist of systematic desensitization; cognitive restructuring and assertiveness training [15]. Communication apprehension exists in every person; the level of shyness or hesitation to participate in discussion is a marker which defines the level of CA [7],[11]. This study aims to evaluate the level of CA among first year and final year pharmacy undergraduates.

Methodology

In August 2007, a cross sectional study was conducted among pharmacy students at University Sains Malaysia (USM). Mainly, there were four groups at USM, Malays, Chinese, Indians and other ethnic minorities. However, at the undergraduate level, there were a high percentage of Malays, Chinese and Indians.

Face to face interviews were conducted using a prevalidated Zimbardo's scale [16]. Zimbardo, 1977, came up with a scale to evaluate CA among students. This scale was previously validated by McCroskey 1970; 1977 [9],[10,]. In order to make the Zimbardo's scale compliant with the Malaysian students,

content validation was conducted. The Zimbardo's scale was further modified according to the local needs; the details are described under the heading of the content validation process.

Participants

This study encompassed a non-experimental method. A cluster random sampling method was used to approach the potential participants. Two clusters were defined on the basis of the types of participants; pharmacy undergraduates from the first and final years. Those willing to participate were a part of the study. Ethical approvals from the research ethics committee of University Sains Malaysia were taken for this study. Moreover, a verbal consent was also taken from the respondents in order to assure the confidentiality of the information.

Content Validation

The content validation process comprised of two phases. In phase one, preliminary content validation was done in consultation with professionals at the School of Pharmacy, USM. Twenty two items out of twenty four were considered as best to attain the objective of the study. Moreover, certain items were modified or restructured to make it compatible according to the local needs. Furthermore, in order to make the scoring more accurate, the previously used five items likert scale were reduced to three items (Agree, Undisclosed and Disagree). In order to enhance the clarity of the questions by the respondents, the questionnaire was further translated to the Malay language (Bahasa Malaysia). The translation of the questionnaire was done by experts at the School of Linguistics, USM. The translated version was rechecked by professionals at the School of Pharmacy in order to check the appropriateness of the word according to the study objectives. After the first phase, content validation of the questionnaire was subjected to phase two validation.

In phase two, a pilot survey was conducted among the twenty five students. Keeping in view the responses of the students, the

reliability scale was applied and the internal consistency of the study tool was estimated on the basis of Cronbach's Alpha ($\alpha = 0.63$). Furthermore, to assure the validity of the contents, factor analysis was carried out. The content validity was estimated by using Bartlett's test of sphericity and the Kaiser-Mayer-Olkin measure of sampling adequacy. The results showed that Bartlett's test of sphericity had a significance of 0.0000 and the Kaiser-Mayer-Olkin measure of sampling adequacy had a significance of 0.790. According to Sheridan and Lyndall (2001), a measure of more than 0.6 reflects the adequacy of the contents of the questionnaire [14]. Thus, these results showed a considerable evidence of reliability and validity of the sampling tool.

Contents Of The Questionnaire

The questionnaire comprised of two parts. One was the demographic part and the second was the part which evaluated the shyness level. The demographic part comprised of four questions i.e age, sex, race and school. However, the second part comprised of twenty two items. Of these twenty, only sixteen items were used to evaluate the level of CA among the students. Furthermore, on the basis of the responses form this section, scoring was done. The list of the items considered for scoring are illustrated in [Table/Fig 1].

(Table/Fig 1) Evaluation of the shyness level among students

| Statements | Scoring of responses | | |
|--|----------------------|-------------|----------|
| | Agree | Undisclosed | Disagree |
| 1. I dislike to participate in the group discussion | 2 | 1 | 0 |
| 2. I feel nervous and tense while participating in a group discussion | 2 | 1 | 0 |
| 3. Group discussion with new people makes me more tense and nervous | 2 | 1 | 0 |
| 4. Usually I am nervous when I have to participate in a meeting | 0 | 1 | 2 |
| 5. I am very calmed and relaxed when I am called upon to express my opinion at a meeting | 0 | 1 | 2 |
| 6. I feel afraid to express myself at meetings | 2 | 1 | 0 |
| 7. Communication at meeting with my colleagues make me uncomfortable | 2 | 1 | 0 |
| 8. I stay relaxed and confident while answering the questions in a meeting | 0 | 1 | 2 |
| 9. Participation in a conversation with a new colleague make me nervous | 2 | 1 | 0 |
| 10. I feel confident in a conversation and express my views without any fear | 0 | 1 | 2 |
| 11. I have no fear in giving speech | 0 | 1 | 2 |
| 12. I feel tense while giving speech | 2 | 1 | 0 |
| 13. My body shake while giving speech | 2 | 1 | 0 |
| 14. I have confused and jumbled thoughts when I am giving a speech | 2 | 1 | 0 |
| 15. I face the prospect of giving a speech with confidence | 0 | 1 | 2 |
| 16. while giving speech I get so nervous , I forget ch facts I really know | 2 | 1 | 0 |

Scoring Of The Responses

The responses obtained from the items mentioned in [Table/Fig 1] were used to evaluate the level of communication apprehension. These responses were scored in order to categorise the communication apprehension into further levels. The maximum possible score for

the questionnaire was 32. However, the maximum score attained by the respondents was 21. Quartiles were applied to classify the communication apprehension into sub levels i.e no communication apprehension, slight communication apprehension, moderate communication apprehension and high communication apprehension. Those who scored 1-5, ranked with no communication apprehension, those who scored 6-10 ranked with moderate communication apprehension, those who scored 11-15 ranked with high communication apprehension and those who scored 16 and over ranked with the highest communication apprehension.

Ethical Approval

The research protocol was approved by the School of Pharmacy, USM. A verbal consent was taken from the respondents. Moreover, keeping in view the ethical requirements, no personal information of the respondents was obtained.

Data Analysis

For the purpose of data analysis, the Statistical package for Social Sciences (SPSS13.0®) was used. Parametric statistics was used. In order to compare the difference in CA among the two genders and among the first year pharmacy students and final year pharmacy students, the Student's t- test was applied. However, in order to compare the level of CA among the ethnic groups, One way ANOVA was used. Moreover, to identify the communication among the different racial groups, Post-Hoc analysis was conducted.

Results

A total of N=268 respondents participated in the survey. A majority [186 (69.4%)] of the respondents were females. A higher participation was observed in respondents from the age group of 18-25 years. About 160 (59.7%) respondents were Chinese, followed by Malay and Indians. Details about the demographics of the respondents are mentioned in [Table/Fig 2].

(Table/Fig 2) Demographics of respondents

| Demographics | | N (%) |
|-----------------------------------|------------|-------------|
| Gender | Male | 82 (30.6%) |
| | Female | 186 (69.4%) |
| Educational year | First year | 142 (53.0%) |
| | Final year | 126 (47.0%) |
| Race | Malay | 93 (34.7%) |
| | Chinese | 160 (59.7%) |
| | Indian | 15 (5.65%) |
| Age [Range=18-37] Mean=22 ±2.8 | 18-20 | 122 (45.5%) |
| | 21-25 | 137 (51.1%) |
| | 26-30 | 5 (1.9%) |
| | 31-35 | 4 (1.5%) |
| | | |

Communication apprehension among pharmacy undergraduates was evaluated on the basis of the sixteen items mentioned; detailed responses are mentioned in [Table/Fig 3]. Further, the scoring of the responses was done. The minimum score of the respondents was two and the maximum was 20. Those who scored 1-5 ranked with no communication apprehension, those who scored 6-10 ranked with moderate communication apprehension, those who scored 11-15 ranked with high communication apprehension and those who scored 16 and over ranked with the highest communication apprehension. Furthermore, to compare the CA among groups, evaluation was carried out in terms of gender and race. The details are described in [Table/Fig 4].

(Table/Fig 3) Students responses about communication apprehension

| Statements | Scoring of responses | | |
|--|----------------------|-------------|----------|
| | Agree | Undisclosed | Disagree |
| 1. I dislike to participate in the group discussion | 35 | 64 | 169 |
| 2. I feel nervous and tense while participating in a group discussion | 72 | 57 | 139 |
| 3. Group discussion with new people makes me more tense and nervous | 126 | 60 | 82 |
| 4. Usually I am nervous when I have to participate in a meeting | 135 | 41 | 92 |
| 5. I am very calmed and relaxed when I am called upon to express my opinion at a meeting | 66 | 64 | 138 |
| 6. I feel afraid to express myself at meetings | 125 | 67 | 76 |
| 7. Communication at meeting with my colleagues make me uncomfortable | 90 | 67 | 111 |
| 8. I stay relaxed and confident while answering the questions in a meeting | 57 | 99 | 112 |
| 9. Participation in a conversation with a new colleague make me nervous | 142 | 63 | 63 |
| 10. I feel confident in a conversation and express my views without any fear | 68 | 72 | 128 |
| 11. I have no fear in giving speech | 49 | 55 | 164 |
| 12. I feel tense while giving speech | 96 | 71 | 101 |
| 13. My body shake while giving speech | 167 | 49 | 52 |
| 14. I have confused and jumbled thoughts when I am giving a speech | 133 | 70 | 65 |
| 15. I face the prospect of giving a speech with confidence | 70 | 116 | 82 |
| 16. while giving speech I get so nervous , I forget ch facts I really know | 144 | 55 | 69 |

(Table/Fig 4) Communication apprehension among different groups

| Demographics | Slight CA 1-5 | Moderate CA 6-10 | High CA 11-15 | Highest CA 16 and over | Total | p-value |
|-------------------------|------------------|---------------------|------------------|---------------------------|-------|---------------|
| Race | | | | | | |
| Malay | 6 | 10 | 47 | 30 | 93 | F=10.592 |
| Chinese | 8 | 25 | 62 | 65 | 160 | dF=2 |
| Indian | 5 | 5 | 4 | 1 | 15 | p<=0.001*# |
| Total | 19 | 40 | 113 | 96 | 268 | |
| Gender | | | | | | |
| Male | 7 | 18 | 38 | 19 | 82 | t= - 43.569 , |
| Female | 12 | 22 | 75 | 77 | 186 | dF=267 |
| Total | 19 | 40 | 113 | 96 | 268 | p<=0.001* □ |
| Educational year | | | | | | |
| First year | 4 | 10 | 63 | 65 | 142 | t= - 40.639 , |
| Final Year | 15 | 30 | 50 | 31 | 126 | dF=267 |
| Total | 19 | 40 | 113 | 96 | 268 | p<=0.001* □ |
| Age | | | | | | |
| 18-20 | 5 | 19 | 52 | 46 | 122 | F=900.081 |
| 21-25 | 10 | 16 | 61 | 50 | 137 | dF=3 |
| 26-30 | 2 | 3 | 0 | 0 | 5 | p<=0.001*# |
| 31-35 | 2 | 2 | 0 | 0 | 4 | |

Mean score= 13.5 ± SD 4.45, (range; Minimum 2, Maximum 20, □ student t-test, # one way ANOVA, p-value significant at 0.05

Malaysia is a multiethnic society and pharmacy is one of the most propagating professions in Malaysia. For a pharmacist to practice, communication skills play a very vital role. Evaluation of CA among undergraduate pharmacy students is the only factor which helps the academicians to put in some additional effort for eradication of the factors resulting in CA. Negligence in this regards will affect the pharmacist's capability to conduct an affective counselling session with the patients and will act a barrier in his/her discussion with their professional peers. The findings of this study reported a higher CA among female pharmacy students. A majority (69.4%) of the respondents were females and in terms of ethnic distribution, a majority (59.7%) were found to be Chinese. About 45.5% of the respondents were from the age group of 18-20 years.

The findings of this study demonstrated that pharmacy students were not that good in their communication with their professional peers, in meetings, and in speech and group discussions [Table/Fig 3]. Especially, if the evaluation was done on the basis of problems faced while delivering a speech, the majority who faced these problems were found to be first year pharmacy students. Scoring on the basis of the responses mentioned in [Table/Fig 4] revealed the significant high CA among first year pharmacy students in comparison with final year pharmacy students (<0.001, t= - 40.639) [Table/Fig 4]. Further exploration on the basis of gender showed that CA was significant among females (0.001, t=-43.569) [13]. Findings demonstrated that regardless of gender and the year of study, Chinese students were found to have a higher level of CA than Malays and Indians.

CA is found in almost every individual at a certain level. Not only do students face these problems, but any one who is involved in any type of social or professional communication is at risk [10]. Those facing CA are not only at a risk of having a low academic profile, but also at the risk of poor self esteem and lack of

Discussion

social skills. Friedman, 1980 has associated CA with anxiety [17]; few relate it to personality problems, while McCroskey, 1977 has associated CA with the situation. However, McCroskey, 1980 and Bond, 1984 believe that CA can be a result of the following seven items [11], [3].

- Lack of intellectual skills or low intellectual skills
- Poor speech skills
- Social shyness
- Social isolation
- Nervousness while conducting a communication
- Low social self-esteem
- Ethnic/cultural issues

In spite of all these facts, one cannot ignore the Negative Cognitive Appraisal Model (NCAM) [6]. In NCAM, Glaser, 1981 stated that CA is a result of poor early language performance of the individual [6]. In response to the poor language performance, an individual fears to speak and this leads to CA. Bond, 1984 has further refined this aspect of CA and has associated it with negative remarks on the poor language performance of an individual by classmates, teachers or family members [3]. Such responses put an individual at a risk of high CA [3].

Possible Cause Of Communication Apprehension Among Pharmacy Students

This is one of the difficult issues to debate. What are the factors resulting in CA among pharmacy students? Either the student is the only one responsible for it, or there are some cultural or social factors contributing to this situation. There is a possibility that communication apprehension among pharmacy students is a blend of social and cultural factors. The findings of the study revealed that a majority of the students reporting a higher level of CA were Chinese. Maybe some underlying cultural issues are the possible factors behind this. However, from my teaching experience and the experience of my other professional peers at different Malaysian universities, Chinese students were found to be at a higher risk of CA

than others. Overall, a lack of participation is observed among Chinese students in the question answer session in the lecture hall; however, Chinese students are observed to be more comfortable in asking the questions and discussing problems individually with the lecturer in his office or discussion room instead of asking the questions in the class. While discussing the issue of CA among pharmacy and non-pharmacy graduates, a possible reason can be the lack of participation of pharmacy students in the extracurricular activities in the campus. Students from other disciplines were found to be more involved in the games, cultural shows, and recreation in comparison with the pharmacy students. Lack of participation of the pharmacy students can be a possible factor which contributes to the high levels of CA.

Conclusion

Our findings demonstrated a high level of CA among pharmacy students. However, in general, Chinese females were found to be at a high risk of CA. Race, gender, age and year of study were found to be the factors which were associated with CA.

Recommendation

There is an immediate need to focus on the communication skills of undergraduate pharmacy students. Negligence in this regards may result in lack of confidence in the future pharmacists to conduct an affective counselling session for the patients. Moreover, communication apprehension also hinders the learning process of the pharmacist, which can result in the inability to share and retrieve patient and pharmacy oriented knowledge from professionals and their colleagues. Furthermore, future studies should focus on the exploration of the factors responsible for communication apprehension among pharmacy students. In addition to this, evaluation of the academic staff's attitude towards the students is also essential, which may be one of the main factors.

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