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Original Research

Perceptions of student paramedic interpersonal communication competence: A cross-sectional study

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Abstract

Introduction

Interpersonal communication skills are essential to the healthcare practitioner aiding in high quality, effective and safe clinical practice. Effective communication exerts a positive influence on the patient's physical and emotional status resulting in better patient outcomes and satisfaction. By identifying strengths and weaknesses, self-assessment of interpersonal communication skills can be used as an intervention tool to inform future curriculum renewal. The objective of this study was to identify paramedic students' perceptions of their interpersonal communication competence.

Methods

Second year paramedic students from Monash University (Victoria) were invited to participate in a survey that asked them to record perceptions of their interpersonal communication skills using the Interpersonal Communication Competence Scale (ICCS). The ICCS is a 30-item unipolar questionnaire using a Likert scale ranging from 1 (almost never) to 5 (almost always). Mean and standard deviations (SD) were used to report results.

Results

Fifty-six second year paramedic students participated in the study. Participants were predominantly aged less than 26 years (85.7%) and female n=36 (64.3%). Students reported 'often' or 'almost always' for the items: 'I put myself in others' shoes', n=46 (82%), mean=3.98 (SD 0.59); and, 'I let others know that I understand what they say', n=45 (80%), mean=3.96 (SD 0.66). Students reported 'sometimes', 'often' or 'almost always', for the items: 'I have trouble convincing others to do what I want them to do', n=55 (98%), mean=3.5 (SD 0.63); and, 'My mind wanders during conversations', n=41 (73%), mean=3.05 (SD 0.88).

Conclusion

Preliminary results suggest that student paramedics self-report their interpersonal communication skills highly apart from areas related to assertiveness and listening skills. These results could be indicative of student age, personality or experience level and warrant further research with larger sample sizes.

Keywords

paramedic, student paramedic, interpersonal communication, competence

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Introduction

Interpersonal communication has long been considered a crucial skill for all healthcare practitioners, with a shift towards an educational framework where interpersonal communication skills assessment becomes paramount (1,2). Although definitions vary, interpersonal skills refer to the techniques used to convey and receive messages between two or more people (1). The literature suggests that interpersonal skills are linked to establishing high quality care and improved patient outcomes (3,4). Furthermore, effective communication has been said to produce therapeutic-like effects, exerting a positive influence on healthcare provider-patient relationships (5). It has been linked to significant benefits such as patient recall and understanding, adherence to treatment plans, symptom resolution, reduced patient distress and increased satisfaction for both patients and healthcare professionals (6,7).

Unlike other healthcare environments, a paramedic generally does not have access to patient records and relies heavily on interpersonal communication skills to elicit a patient history (5). The dynamic role of the paramedic has developed over the years and now encompasses higher levels of patient care and interventions, which all require thorough patient assessment (8). Paramedics also operate in emotionally charged and challenging environments, where interpersonal communication skills are essential to gaining patient trust and cooperation while developing an understanding of the patient's presenting problem (5).

Similarly, interprofessional communication – communication between two or more healthcare professionals – is also an important skill for paramedics (5). Interpersonal communication skills are not only used during patient assessment and management, but also for patient handover at definitive care where the accuracy of clinical handovers is essential (9). Numerous studies have revealed that poor clinical handovers are high risk events that are directly associated with adverse outcomes, making it critical to utilise interprofessional communication skills effectively and efficiently (9,10).

The ability to convey and receive messages effectively within the prehospital emergency care environment is necessary to aid in high quality and safe medical practice (5). This has caused a shift towards interpersonal skills training and assessment in the education system. However, controversy in regards to the measurement of interpersonal communication competence (ICC) has been raised (2). Interpersonal communication competence refers to a person's ability to manage and interact flexibly with others in communication settings. Currently, the four most prominent measurements of interpersonal communication skills include objective observation, subjective observation, self-report and receiver-report methods (11).

The Interpersonal Communication Competence Scale (ICCS) was developed by Rubin and Martin (12) as a self-reported measure of 10 ICC skills. This survey was developed based on the notion that self-perceived communication competence is significantly linked with an individual's willingness to communicate and that self-confidence can aid in achieving satisfying communication outcomes. The ICCS can be used to make predictions about the relationship between a student paramedic's self-perceived and actual communication competence (13). A systematic review and analysis of suitable

communication scales recommended the ICCS as one of only two suitable scales due to its strong face validity and reliability (2). Shue and Arnold (14) utilised a similar self-report measure to compare medical students' perceptions of their interpersonal competence to the actual ratings of observing assessors. Several nursing studies have also utilised self-report surveys on communication competence to evaluate their teaching methods (15,16).

The objective of this study was to identify paramedic students' perceptions of their interpersonal communication competence.

Methods

Study design

This was a cross-sectional study utilising a paper-based version of the ICCS to elicit students' perceptions of their interpersonal communication (13).

Participants

A convenience sample of second year Bachelor of Emergency Health (Paramedic) and third year Bachelor of Emergency Health (Paramedic)/Bachelor of Nursing students from Monash University (Victoria) were eligible to participate in the study (a total 116 students).

Instrumentation

The ICCS is a brief, global, self-report measure of 10 ICC skills. It consists of a 30-item unipolar questionnaire using a Likert scale ranging from 1 (almost never) to 5 (almost always). Each of the 10 ICC dimensions: self-disclosure, social relaxation, supportiveness, expressiveness, empathy, assertiveness, environmental control, interaction management, altercentrism and immediacy, contain three items. The 30-item scale shows internal consistency with an overall Cronbach alpha of 0.86 and was found to be related to both cognitive and behavioural communication flexibility (12). Some items were scored in reverse. A demographic section at the front of the questionnaire asked students to state the course they were enrolled in, and the year of that course, and their gender and age.

Procedures

Students were invited to complete the survey at the conclusion of a lecture held during semester one of 2013. Students were provided with an explanatory statement and asked to participate on a voluntary and anonymous basis. They were administered a demographic questionnaire followed by the ICCS by a non-teaching staff member. The students took between 5 and 10 minutes to complete the survey with no time limits placed on completion. Consent was implied by submitting the completed questionnaire. Students could only withdraw from the study if they had not submitted the questionnaire due to a lack of identifying criteria on the questionnaire.

Data analysis

The Statistical Package for Social Sciences (SPSS) Version 20.0.0.2 (IBM Corporation, Armonk, New York, U.S.A.) was used for data entry, storage and analysis. Mean and standard deviations (SD) were used to describe the demographic data and some of the individual question responses, with independent sample t-test and analysis of variance (ANOVA) used to determine if any differences existed between the course, gender, year of study and age groups. All tests were two-tailed unless otherwise stated with results considered statistically significant if the p value was <0.05.

Ethics

Ethics approval was obtained by the Monash University Human Research Ethics Committee.

Results

Participant demographics

There were 56 students who participated in the study, a response rate of 48%. There were 41 (73.2%) students from the Bachelor of Emergency Health (Paramedic) course and 15 (26.8%) from the Bachelor of Emergency Health (Paramedic)/ Bachelor of Nursing course.

The majority of students were female (36, 64.3%). The average age of the students was 22.41 years (median 21 years, range 19–39 years). The majority of students (26, 46.4%) were aged

21–25 years with the next largest group being less than 21 years (22, 39.3%).

Individual scale items

The students' perceptions were high in 'I communicate with others as though they're equals' (mean=4.39, SD=0.70); 'Other people think that I understand them' (mean=4.0, SD=0.63); 'My friends truly believe that I care about them' (mean=4.32, SD=0.57); 'I try to look others in the eye when I speak with them' (mean=4.29 SD=0.65), and 'I feel relaxed in small group gatherings' (mean= 4.05, SD=0.80).

The students' perceptions were low in 'I take charge of conversations I'm in by negotiating what topics we talk about' (mean=2.73, SD=0.80), and 'Other people know what I'm thinking' (mean=2.95, SD=0.75). See Table 1 for full distribution of results.

Table 1. Item level results

Statement	Mean (SD)
1. I feel insecure in groups of strangers (R)	3.2 (0.79)
2. I can put myself in others' shoes	3.98 (0.59)
3. In conversations with friends, I perceive not only what they say but what they don't say	3.79 (0.68)
4. I communicate with others as though they're equals	4.39 (0.70)
5. It is difficult to find the right words to express myself (R)	3.32 (0.93)
6. I allow friends to see who I really am	3.82 (0.90)
7. I have trouble standing up for myself (R)	3.71 (0.93)
8. My communication is usually descriptive, not evaluative	3.18 (0.54)
9. I can persuade others to my position	3.61 (0.65)
10. Other people think that I understand them	4.0 (0.63)
11. My conversations are pretty one-sided (R)	3.73 (0.59)
12. I tell people when I feel close to them	3.04 (1.08)
13. I take charge of conversations I'm in by negotiating what topics we talk about	2.73 (0.8)
14. When I've been wronged, I confront the person who wronged me	3.04 (0.88)
15. I have trouble convincing others to do what I want them to do (R)	3.5 (0.63)
16. I reveal how I feel to others	3.29 (0.95)
17. I let others know that I understand what they say	3.96 (0.66)
18. I don't know exactly what others are feeling (R)	3.46 (0.63)
19. Others would describe me as warm	3.95 (0.67)
20. My friends truly believe that I care about them	4.32 (0.57)
21. I am comfortable in social situations	3.98 (0.62)
22. I express myself well verbally	3.79 (0.75)
23. I try to look others in the eye when I speak with them	4.29 (0.65)
24. I stand up for my rights	3.98 (0.75)
25. I accomplish my communication goals	3.84 (0.68)
26. My mind wanders during conversations	3.05 (0.88)
27. My conversations are characterised by smooth shifts from one topic to the next	3.45 (0.66)
28. My friends can tell when I'm happy or sad	3.61 (0.92)
29. Other people know what I'm thinking	2.95 (0.75)
30. I feel relaxed in small group gatherings	4.05 (0.80)

R = question reversed

Subscale items

When comparing the different subscales by course, year, gender and age group there was only one subscale (supportiveness) which had a statistically significant difference and that was between the age groups (see Table 2). Students' perceptions were highest in the immediacy, supportiveness and empathy sub-scales (mean scores 3.88, 3.84 and 3.81) and lowest in interaction management and self-disclosure (mean scores 3.32 and 3.35).

Discussion

The results from the ICCS indicate that paramedic students in the surveyed cohort felt they had well-developed interpersonal skills in some areas but deficiencies in others. Perhaps these perceptions are well founded but they could also be indicative of overconfidence or lack of insight. Shue and Arnold (14) found that while the medical students participating in their study identified similar weaknesses, they rated their interpersonal communication skills higher than the evaluators.

The subscales that had the highest scores in the ICCS were empathy, supportiveness and immediacy, while the lowest scores were found in self-disclosure and interaction management. The only statistically significant comparison in this study was found in the supportive subscale domain where students over 25 years perceived their skills in this area to be higher. It is well documented that young adults and adolescents have greater levels of egocentrism (17,18), however, it is interesting that these participants had enough insight to rate themselves as such.

Participants rated their ICCS high in items indicating a perceived willingness and/or ability to connect with others and include them in discussions by looking people in the eye and making them feel cared about. Additionally, students reported that they communicated with others as though they are equals and they perceived themselves as warm and supportive. These interpersonal qualities are paramount in paramedic practice to gain the respect, trust and cooperation of patients who are often fearful, lonely, uncertain, isolated and often in pain (5).

Student responses indicated empathetic and supportive qualities where they felt they were able to treat people as equals and show understanding. Being able to express empathy strengthens the healthcare professional-patient bond and allows the patient to feel supported, accepted and well regarded, and is considered a vital fundamental skill for paramedics (19,20). This skill has been shown to add to the development of a therapeutic relationship between patients and healthcare workers, putting the patient at ease and promoting positive outcomes (19,21,22). Importantly, empathy strengthens patient satisfaction and compliance, enhances the quality of information they give, improves quality of care, and is associated with improved patient outcomes while reducing the chances of lawsuits and miscommunication (23–28).

One item that participants rated themselves poorly in was in the interaction management domain. Participants reported it difficult to take charge of conversations and direct them to topics of their choice. This is an important skill when gathering histories as often patients need to be redirected in order to gather necessary information and begin treatment in a timely fashion. This skill, however, is likely to improve with experience and confidence, particularly as students participate in simulation, clinical placement and upon entering the workforce as novice paramedics (29,30).

Another item that scored low was from the self-disclosure sub-scale: 'Other people know what I am thinking'. Perhaps this is another example of egocentrism as most of the students in this study were aged less than 26 (85.7%).

Limitations of this study

This study was potentially limited by the use of convenience sampling, which may have introduced potential bias in the sample as those students who volunteered their time may have more proactive and generous traits compared to those who chose not to participate. Another potential limitation was the small sample size, making any generalisations to other student groups not possible. Finally, participants may have answered questions in a 'socially desirable' manner, therefore reported results may vary from students' private views and thus results need to be interpreted with caution.

Table 2. Subscale comparisons and mean scores

Sub-scale	Course P	Year P	Gender P	Age Group P	Average scores
Self-disclosure	0.09	0.08	0.32	0.36	3.35
Empathy	0.38	0.44	0.84	0.89	3.81
Social relaxation	0.55	0.51	0.81	0.53	3.73
Assertiveness	0.74	0.66	0.82	0.20	3.58
Altercentrism	0.58	0.63	0.89	0.64	3.58
Interaction management	1.00	0.22	0.50	0.12	3.32
Expressiveness	0.71	0.75	0.71	0.24	3.57
Supportiveness	0.26	0.30	0.09	0.01	3.84
Immediacy	0.28	0.22	0.16	0.38	3.88
Environmental control	0.97	0.86	0.55	0.46	3.65

Conclusion

The results from the ICCS indicate that paramedic students in this study felt they had well-developed interpersonal skills in some areas but deficits in others. Students rated their skills highest in the empathy, supportiveness and immediacy sub-scales and lowest in self-disclosure and interaction management. It is recommended that this study be replicated on a larger scale to further investigate students' perceptions and gain more significant results.

References

1. O'Toole G. Communication: core interpersonal skills for health professionals. Elsevier Australia, 2008.
2. Ang WC, Swain N, Gale C. Evaluating communication in healthcare: systematic review and analysis of suitable communication scales. *Journal of Communication in Healthcare* 2013;6(4):216–22.
3. Rider EA, Keefer CH. Communication skills competencies: definitions and a teaching toolbox. *Med Educ* 2006;40(7):624–9.
4. Griffin SJ, Kinmonth A-L, Veltman MW, Gillard S, Grant J, Stewart M. Effect on health-related outcomes of interventions to alter the interaction between patients and practitioners: a systematic review of trials. *Ann Fam Med* 2004;2(6):595–608.
5. Sanders MJ. Mosby's Paramedic Textbook. 4th edn. Burlington, MA: Jones & Bartlett Publishers, 2011.
6. Bennett K, Lyons Z. Communication skills in medical education: an integrated approach. *Education Research & Perspectives* 2011;38(2):45–56.
7. Zick A, Granieri M, Makoul G. First-year medical students' assessment of their own communication skills: a video-based, open-ended approach. *Patient Educ Couns* 2007;68(2):161–6.
8. Williams B, Onsmann A, Brown T. From stretcher-bearer to paramedic: the Australian paramedics' move towards professionalisation. *J Emerg Prim Health Care* 2009;7(4).
9. Owen C, Hemmings L, Brown T. Lost in translation: maximizing handover effectiveness between paramedics and receiving staff in the emergency department. *Emerg Med Australas* 2009;21(2):102–7.
10. Wong MC, Yee KC, Turner P. A structured evidence-based literature review regarding the effectiveness of improvement interventions in clinical handover. The Group; 2008. Available at: www.thoracic.org.au/documents/papers/clinicalhandoverliteraturereview.pdf.
11. McCroskey JC, McCroskey LL. Self-report as an approach to measuring communication competence. *Commun Res Rep* 1988;5(2):108–13.
12. Rubin RB, Martin MM, Bruning SS, Powers DE. Test of a self-efficacy model of interpersonal communication competence. *Commun Q* 1993;41(2):210–20.
13. Rubin RB, Martin MM. Development of a measure of interpersonal communication competence. *Commun Res Rep* 1994;11(1):33–44.
14. Shue CK, Arnold L. Medical students' interviews with older adults: An examination of their performance. *Health Commun* 2009;24(2):146–55.
15. Xie J, Ding S, Wang C, Liu A. An evaluation of nursing students' communication ability during practical clinical training. *Nurse Educ Today* 2013;33(8):823–7.

Competing interests

The authors declare they have no competing interests.

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16. Mullan BA, Kothe EJ. Evaluating a nursing communication skills training course: the relationships between self-rated ability, satisfaction, and actual performance. *Nurse Educ Pract* 2010;10(6):374–8.
17. Elkind D. Egocentrism in adolescence. *Child Dev* 1967;38(4):1025–34.
18. Frankenberger KD. Adolescent egocentrism: a comparison among adolescents and adults. *J Adolesc* 2000;23(3):343–54.
19. Hojat M, Gonnella JS, Nasca TJ, Mangione S, Vergare M, Magee M. Physician empathy: definition, components, measurement, and relationship to gender and specialty. *Am J Psychiatry* 2002;159(9):1563–9.
20. Williams B, Boyle M, Earl T. Measurement of empathy levels in undergraduate paramedic students. *Prehosp Disaster Med* 2013;28(02):145–9.
21. Hojat M, Gonnella JS, Mangione S, et al. Empathy in medical students as related to academic performance, clinical competence and gender. *Med Educ* 2002;36(6):522–7.
22. Hojat M, Mangione S, Kane GC, Gonnella JS. Relationships between scores of the Jefferson scale of physician empathy (JSPE) and the Interpersonal Reactivity Index (IRI). *Med Teach* 2005;27(7):625–8.
23. Coulehan JL, Platt FW, Egner B, et al. "Let me see if I have this right...": words that help build empathy. *Ann Intern Med* 2001;135(3):221–7.
24. Bikker AP, Mercer SW, Reilly D. A pilot prospective study on the consultation and relational empathy, patient enablement, and health changes over 12 months in patients going to the Glasgow Homoeopathic Hospital. *J Altern Complement Med* 2005;11(4):591–600.
25. Kim SS, Kaplowitz S, Johnston MV. The effects of physician empathy on patient satisfaction and compliance. *Eval Health Prof* 2004;27(3):237–51.
26. Vermeire E, Hearnshaw H, Van Royen P, Denekens J. Patient adherence to treatment: three decades of research. A comprehensive review. *J Clin Pharm Ther* 2001;26(5):331–42.
27. Beckman HB, Markakis KM, Suchman AL, Frankel RM. The doctor-patient relationship and malpractice: lessons from plaintiff depositions. *Arch Intern Med* 1994;154(12):1365.
28. Levinson W, Roter DL, Mullooly JP, Dull VT, Frankel RM. Physician-patient communication: the relationship with malpractice claims among primary care physicians and surgeons. *JAMA* 1997;277(7):553–9.
29. Ross L. Interpersonal skills education for undergraduate nurses and paramedics. *Journal of Paramedic Practice* 2012;4(11):655–61.
30. Gerrish K. Still fumbling along? A comparative study of the newly qualified nurse's perception of the transition from student to qualified nurse. *J Adv Nurs* 2000;32(2):473–80.