Professional communication competences of paramedics – practical and educational perspectives

Anna Włoszczak-Szubzda1,2, Miroslaw J. Jarosz1,2, Mariusz Goniewicz3

1 Department of Health Informatics and Statistics, Institute of Rural Health, Lublin, Poland
2 Faculty of Pedagogy and Psychology, University of Economics and Innovation, Lublin, Poland
3 Faculty of Health Sciences, School of Economics and Law, Kielce, Poland


Abstract

Introduction: Dissonance between the high ‘technical’ competences of medical professionals, including paramedics or emergency medical technicians (EMT), and the relatively low level of patient satisfaction with care received, is a phenomenon observed in many countries. Many studies show that it occurs in the case of an inadequate interpersonal communication between medical professionals and patients. The primary goal of the presented research was evaluation of the level (study of the state) of communication competences of paramedics, and determination of the factors on which this level depends. An additional goal was analysis of the needs and educational possibilities within the existing models of education in the area of interpersonal communication provided by higher medical education institutions.

Methods: The following three methods were used: 1) documentation analysis (standards, plans and educational programmes); 2) diagnostic survey concerning professional communication competences of paramedics; 3) self-reported communication skills in emergency medical services – adjective check list. The last two instruments were subject to standardization from the aspect of reliability and validity. The study group covered a total of 105 respondents in the following subgroups: 1) professional paramedics who, as a rule, were not trained in interpersonal communication (31 respondents); paramedic students covered by a standard educational programme (34 respondents); paramedic students who, in addition to a standard educational programme, attended extra courses in professional interpersonal communications (20 respondents).

Results: The results of studies indicate poor efficacy of shaping communication competences of paramedics based on education in the area of general psychology and general interpersonal communication. Communication competences acquired by paramedics during undergraduate education are subject to regression during occupational activity.

Discussion: Methods of evaluating communication competences are useful in constructing group and individual programmes focused on specific communication competences, rather than on general communication skills.

Key words

paramedics, emergency medical technicians, interpersonal communication, education, patient satisfaction

INTRODUCTION

The occupation of a paramedic or emergency medical technician is an occupation especially exposed to emotions which are strong and difficult to unequivocally interpret. Paramedics, on a daily basis, deal with pain, suffering, and fear of patients and their significant others, and experience their own fear, helplessness, or sometimes anger. Knowledge of the level of these emotions allows adequate education in the provision of assistance and protection against occupational burnout. Similar to other medical professionals, the management of own emotions and those of others is an important element in the work of a paramedic [1].

An assessment of this situation is based on individual statements expressed by professional paramedics; however, there is a lack of studies related with this aspect of the occupation of a paramedic which would enable improvement of educational strategies and be useful in everyday practice.

Paramedics frequently ‘touch’ the phenomenon of death of patients, and sometimes of own paramedic colleagues. Sometimes, there falls on their shoulders the necessity to inform relatives of a patient's death, or disclose to the families the death of colleagues who tragically passed away. There is no painless way to pass on such information; nevertheless, there are methods which help to relieve own stress in such circumstances, in the most humanitarian way possible. Studies concerning education in this aspect of communication indicate that even a basic course helps the trainees and their care receivers [2, 3].

Prophylactic psychological care allows the understanding of the state of own feelings and the feelings of those to whom the paramedic provides help. In this way, the paramedic learns what to expect at work from the psychical aspect, and how to cope with the burden of feelings, perceptions and emotions which are inseparable in the life of each individual [4].

Paramedics should know how to cope themselves, and assist a patient in life threatening situations and poor prognoses, how to behave while facing a dying patient and his/her family, and also how to behave with respect towards aggressive patients, how to cope with a disabled patient, communicate with children, adolescents and old age patients. They should also know how to work as a team during a rescue operation, how to manage the rescue team
during difficult situations, mass accidents and disasters, not only from purely medical but also the psychical aspect. The paramedic should be familiar with the symptoms, effects, and ways of coping in the situation of burnout syndrome. In order to develop emotional intelligence, it is beneficial first to know the essentials, and have the possibility of practical training [5, 6, 7].

An elementary duty of each paramedic is the provision of assistance and care. What does this mean in the sphere of communication competences? It is best defined by the English word ‘CARE’ – approached as an acronym for the list of four skills: Comfort, Acceptance, Responsiveness, Empathy [5].

The feeling of psychological comfort of a patient results from the paramedic’s skills of undertaking the scope of problems which are commonly considered as sensitive or painful (deformations, disfigurements, urinary incontinence, sexuality, death, etc.), which are relatively often encountered by a paramedic while performing occupational activities. The more uncomfortable the paramedic feels, the greater the discomfort experienced by the patient [7].

Acceptance – is respecting a patient’s feelings and attitudes. This is a trait which, on the one hand, makes the paramedics aware that they are dealing with a human being, not an object, and on the other hand, a paramedic is also just a human being subjected to cultural, moral and social prejudices. Obviously, these prejudices have to be eliminated, but to do so, paramedics have to know that they possess such prejudices [8].

Responsiveness – is the correct perception of cues and signs coming from the patient by verbal and non-verbal routes, and their use to provide assistance to this patient. The capability to respond depends on the skills of an active, concentrated listening and observation of the patient, paying attention to voice modulation, hesitation, gesture or other body sign language [5].

Empathy – is often defined as the capability to experience the psychological states of others, skills of understanding their way of thinking, and looking at reality from their perspective. This definition may frequently evoke doubts among medical professionals who provide help to others. Each individual has some resistance against entering into such a situation. Therefore, it is necessary to explain and emphasize that empathic reactions do not mean that the person who provides assistance experiences the same feelings as the patient. Paramedics share these feelings to a degree to which they are understood and recognized, and that in the same circumstances would probably experience similar feelings. Trained empathic skills allow the delineation of the limits of emotional engagement in a patient’s problems. These limits do not have to be established by means of inadequate attitudes, being patronizing, condescending, prepondering, turning everything into a joke or being ignorant [9, 10].

The four above-described skills: 1) creation of Comfort, 2) Acceptance, 3) Responsiveness and 4) Empathy, allow handling of the emotional aspect of a patient in a way safe for the care provider, and with a proficiency equal to that in the ‘technical’ sphere. The creation of a comfortable atmosphere and acceptance enable control of negative, sometimes destructive emotional responses of a paramedic. Responsiveness and empathy allow the recognition of the psychological state of a patient, and to deal with it without escaping into indifference or excessive sympathy.

Assertiveness – awareness and respecting own right and skills of their execution without violating the rights of others, is useful in the work of a paramedic, both when dealing with patients and in a rescue team. Assertiveness is based on honesty and openness, allows the relief of negative feelings and, in consequence, to avoid or defuse conflicts [11, 12].

The language of communication, verbal and non-verbal, are equally important elements of providing assistance. Verbal language is divided into the component concerning communication with a patient, and the component which is used when talking about the patient. Both components are of tremendous importance in shaping an adequate occupational attitude of paramedics, and both are an educational component of the psycho-prophylaxis of a rescue action. It is obvious that the way of talking to another person conditions good or bad communication. One may not be familiar with the principles of good verbal communication; however, its usefulness is unquestionable. The role of the language used by the professionals (paramedics) is less obvious. Medical staff often use their own terms, not understood by patients. If these alternate terms objectify a patient e.g. banana – patient with yellow jaundice (AmE), goldbrick – patient who demands more attention than their (minor) condition warrants (AmE), player – complaining, irritating patient (AmE), rock – very stable patient (AmE), medical professionals may subconsciously approach a patient as an object. In everyday practice, such talking and thinking about a patient allows distancing oneself from the patient’s suffering, and thus reduce own stress. This seemingly helps, but relatively quickly leads to dehumanization of the activities undertaken, and only apparent provision of assistance to another person.

Knowledge concerning body language of patients is a very valuable instrument in the work of a paramedic. The entire non-verbal context provides information about the emotional state of the person who needs assistance – and unequivocal information because, according to the experts in non-verbal communication, the human body does not lie. Considering the time limitations of rescue action, knowledge of this type is even more important. Touch is a component of non-verbal communication. Intimacy (closeness) has connotations with sex or aggression, and in various cultures there are specified social norms which regulate the accepted area and way of touching, according to the type of relationship. This is often a problem in the work of paramedics, because while examining or dressing they work in a sphere to which, in normal conditions, only the closest people are admitted [13, 14, 15].

Duress of circumstances, saving health and life, is not a reason for being unaware of a patient’s feelings. Flexing muscles by a patient is nothing but an attempt to behave bravely during examination. Each touch has the features of a message. The essence of the problem consists in, among other things, that the delicate and gentle touch anticipated by the sufferer may have unexpected sexual connotations. Similarly, a determined touch, a so called ‘heavy hand’ of the examiner, is an attempt to get rid of sexual connotation resulting, ‘nota bene’ from the lack of professional self-confidence [5, 6].

It seems that general psychological and communication knowledge, although indispensable for a basic recognition of the scope of communication problems, is poorly occupationally useful for paramedics if not accompanied by specially trained professional communication skills. It seems that despite international and cultural differences, if
there is a lack of practical classes in intra-psychological and intra-communication training, the general psychological and communication knowledge imparted alone, may be used improperly.

The primary goal of the presented research was evaluation of the level (study of the state) of professional communication competences of paramedics, and determination of the factors on which this level depends. An additional goal was analysis of the needs and educational possibilities within the existing models of education in the area of interpersonal communication provided by higher medical education institutions.

In order to achieve the presented goals, the following research questions were formulated:
1. What is the level of individual communication competences of paramedics (knowledge, motivation and skills)?
2. Are there any differences in the level of professional communication competences according to the model of education? i.e.:
   a) education within the scope of general psychological knowledge;
   b) education within the scope of general interpersonal communication;
   c) education within the scope of professional interpersonal communication skills.

Based on earlier own studies, the following research hypotheses were posed:
1. The level of individual communication competences of paramedics based on general psychological and communication knowledge is relatively low.
2. There are significant differences in the level of communication competences according to the education model applied in the education of paramedics.

**METHODS**

In the research process, three basic scopes of communication competences were considered: 1) motivation, 2) knowledge, and 3) skills. Motivations bias the behaviour of an individual towards the achievement of specified states of affairs which are important for this individual. The motivation process consists of a set of individual motives. A motive may be termed an experience stimulating an individual to action, or refraining from or hindering its performance. Knowledge of interpersonal communication covers contents concerning what should be said or done in specified situations, and procedures based on which of these contents will be introduced into practice. It is necessary to recognize the complexity of interpersonal contacts; however, only its adequate application in practice makes a person communicatively competent [10, 16].

To communication skills contribute, among other things, emotional intelligence, i.e. personal competences of an individual, understood as skills of recognizing own emotional states and the emotional states of others, as well as skills of using own emotions and coping with emotional states of others which, in spite of the common opinion, may be trained and developed [17, 18, 19].

The investigation of these scopes is important from the aspect of understanding the research problems posed, and a potential design for their repair programme. In the research process, three methods were used:
1. analysis of documentation (standards, education schedules, curricula and syllabuses);
2. diagnostic survey concerning professional communication competences of paramedics – self-designed questionnaire;
3. testing of professional self-evaluation from the paramedics aspect – the 20 items adjective check list [20].

Analysis of documentation covered an evaluation of official standards of paramedics’ education currently in effect in Poland. Based on these standards, individual schools engaged in the education of paramedics develop their own education schedules, curricula and syllabuses. Curricula and syllabuses were compared in 20 paramedic schools in Poland, which were available on the websites of these educational facilities. The 54 items in the questionnaire and test examine the following:
1. within the scope of motivation:
   a) affective dimension vs. cognitive (shows to what extent communication is motivated by emotions, and to what extent by intentions, if the message is the result of the ‘stream’ of emotions or the effect of consideration and planning);
   b) positive vs. negative dimension (if the message is useful or harmful, advantageous or disadvantageous for a patient);
   c) directed towards ‘Own self’ vs. biased towards ‘Others’ (if the message was generated exclusively for own needs, or considered others).
2. within the scope of knowledge:
   a) declared dimension (what to communicate?)
   b) procedural dimension (how to communicate?)
3. within the scope of skills:
   a) dimension of carefulness (skills of showing during an interaction – interest, concern and attention to a patient or patients);
   b) dimension of expressiveness (skills of managing verbal and non-verbal communication);
   c) dimension of coordination (skills of managing the course of interaction);
   d) dimension of self-possession (in interpersonal communication this is a basic requirement of being competent).

The self-designed questionnaire and adjective test were subjected to standardization from the aspect of reliability and validity by means of:
1. pilot studies;
2. competent judges test;
3. Kendall’s coefficient of concordance (Kendall’s W) examining the degree of conformity assessments of competent judges;
4. test-retest method examining the reliability (stability) of the instrument;
5. t-Student test for paired samples, investigating the significance of the differences between each pair of questions in test and retest.

As a result of pilot studies investigating face validity, the contents of one of the questions was changed (the respondents reported lack of understanding of the concept used), and one item was added as a result of suggestions by the respondents. Competent judges assessed content validity (intrinsic) of the instrument, from the aspect of adequacy of its content.
with respect to the objective of the study and position in theory, level of difficulty of the contents, correlation between problems, clarity of instructions, as well as the level of acceptance while completing. The group of judges covered 6 specialists representing the following areas of knowledge: 1) medicine, 2) philosophy/ethics, 3) pedagogy, 4) law, 5) psychology. Table 1 presents the results of examinations of the level of concordance between the judges’ opinions.

Table 1. Kendall’s test of level of concordance of competent judges.

<table>
<thead>
<tr>
<th>Characteristics of the instrument</th>
<th>W</th>
<th>p</th>
<th>r</th>
<th>(r)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequacy to the problem</td>
<td>0.86</td>
<td>&lt;0.01</td>
<td>0.83</td>
<td>69%</td>
</tr>
<tr>
<td>Easiness of completing</td>
<td>0.87</td>
<td>&lt;0.01</td>
<td>0.84</td>
<td>71%</td>
</tr>
<tr>
<td>Clarity of instructions</td>
<td>0.86</td>
<td>&lt;0.01</td>
<td>0.83</td>
<td>69%</td>
</tr>
<tr>
<td>Level of contents acceptance</td>
<td>0.88</td>
<td>&lt;0.01</td>
<td>0.86</td>
<td>73%</td>
</tr>
<tr>
<td>Level of contents difficulty</td>
<td>0.88</td>
<td>&lt;0.01</td>
<td>0.86</td>
<td>73%</td>
</tr>
<tr>
<td>Correlation of problems</td>
<td>0.91</td>
<td>&lt;0.01</td>
<td>0.90</td>
<td>81%</td>
</tr>
</tbody>
</table>

W – Kendall’s W; p – significance; r – mean correlation of evaluations; (r)² – percentage of variance of general concordance of evaluations.

Reliability was investigated by means of the ‘test-retest’ method, by examining the same group twice, every 2 weeks. The results were calculated in a logic test (1 – concordance, 2 – lack of concordance). The mean concordance was 85%.

The last method applied for the standardization of the instrument was Student test investigating, with a significantly positive correlation between every pair of the questionnaire items (from test and retest), the presence of statistically significant differences. Out of 54 pairs of questions, statistical differences were observed only in two pairs.

During the studies the following conditions of objectivity were preserved:

a) independence of the respondents (without unconscious pressure, e.g. resulting from subordination, when the surveyor is a lecturer or supervisor, and the respondents are his/her students or subordinates);

b) all respondents expressed informed consent to participate in the studies;

c) conditions of conducting the studies were standardized for all groups examined;

d) the questionnaire form included a precise and clear instruction.

The presented research was carried out as part of a many-year programme of monitoring and evaluation of the education of medical professionals in interpersonal communication, including physicians, paramedics, physiotherapist and nurses, conducted at the institutions educating medical professionals in Lublin (Poland). In a pilot study, in order to standardize the research instrument, a total number of 30 respondents were examined. The respondents participating in the pilot study were not enrolled into the main study. The study group covered a total number of 105 respondents in the following sub-groups:

1. occupationally-active paramedics (31 respondents), who were covered by a pre-graduate standard educational programme, and not trained in interpersonal communication skills as part of their continuing education;

2. paramedic students covered by a standard educational programme (54 respondents);

3. paramedic students who, in addition to a standard educational programme, attended extra courses in nursing professional interpersonal communications, as part of the pilot educational programme (20 respondents).

The data obtained were subjected to statistical analysis by means of SPSS statistical software with the use of descriptive statistics and hypothesis testing. The presence of the differences between qualitative variables were investigated by means of Pearson’s chi-square test, whereas the significance of quantitative variables was examined with the use of single-factor analysis of variance (ANOVA). The p values < 0.05 were considered statistically significant.

RESULTS

Analysis of documentation

Analysis of the documentation showed that the standards of education for paramedics currently in effect in Poland, in the description of qualifications, do not cover as a requirement the skills within the scope of professional medical (rescue) interpersonal communication, but focus rather on general psychological and communication knowledge. Nevertheless, educational contents include records of knowledge concerning the relationship between a medical professional and a patient, with emphasis placed on the difficulties in cooperation. This, however, is only one of many issues undertaken during the didactic hours in psychology. There is a lack not only of educational contents from the sphere of occupational interpersonal communication, but also interdisciplinary communication [21, 22, 23].

Diagnostic survey

In the group of the paramedics examined, the mean value of indicators of motivation and skills, which may theoretically range from 0-1, was lower than the mean values of these indicators in the two remaining groups, i.e. students who completed a training course in professional medical communication, and students who participated in a standard training in psychology. Only the mean value of the indicator of knowledge was higher among professional paramedics, compared to students who completed a standard course in psychology. The differences with respect to motivation, knowledge and skills turned out to be highly significant statistically (Tab. 2).

Professional self-evaluation

Comparison of selected communication competences in the groups examined confirmed that professional paramedics showed the greatest shortcomings in the following areas:

1. acceptance of a patient (93.5%);

2. knowledge of the role of communication, feedback (71%).

Students of emergency medicine who completed a standard course in psychology showed the greatest shortcomings in the following areas:

1. knowledge of empathy (68.5%);

2. knowledge of assertiveness (61.1%);

3. knowledge of psychological self-defence mechanisms (53.7%);

4. knowledge concerning the role of active listening in communication (72.2%).
Students of emergency medicine who, apart from the standard training course in psychology, participated in a professional course in interpersonal communication, possessed the fewest shortcomings within the scope of communication competences examined. The above-described relationships were significant or highly significant statistically (Tab. 3).

**DISCUSSION**

Professional behaviour is one of the cornerstones of effective emergency services (EMS) practice. In the study by Brown et al., the behaviours most highly rated were integrity and appearance/personal hygiene [24]. Dealing with illness, recovery and death require health care workers to manage not only their own emotions, but also the emotions of those around them. However, little is known about the requirements for emotion management on the part of front-line staff [2].

Smith-Cumberland et al. emphasize several important issues including: 1. the impact that emergency medical technicians (EMT) have on the family at the time of death; 2. the EMT’s role includes making death notifications and helping meet the psychosocial needs of the bereaved; 3. that these roles and skills are as important as any other part of their professional duties. Death notifications and interaction with bereaved families require more training in this area [3]. The data showed that EMTs’ attitudes toward death changed after exposure to a training programme about death [1].

Williams examined emotional labour in health care and historical influences on paramedic education. In that study, the implications of “emotion work” for the educational curriculum and the support of student paramedics are discussed, and strategies such as counselling, reflection and personal tutoring are suggested. Mentorship selection and preparation are highlighted, and the need for a cultural change in attitude towards emotion work [25].

The focus on the role of non-technical skills, such as communication, dynamic decision making, situational awareness and teamwork in emergency medicine, has gained importance during recent years. These factors, especially during time-critical and complex treatment of severely injured patients, play an important role for patient-safety

<table>
<thead>
<tr>
<th>Evaluated skill</th>
<th>Results</th>
<th>Group</th>
<th>Occupationally-active paramedics</th>
<th>Paramedic students covered by standard educational programme</th>
<th>Paramedic students who participated in an extra communication course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient acceptance</td>
<td></td>
<td>Chi² p</td>
<td>14.086 .000</td>
<td>17.788 .000</td>
<td>12.204 .002</td>
</tr>
<tr>
<td>Knowledge of the role of empathy</td>
<td></td>
<td>Chi² p</td>
<td>28.001 .000</td>
<td></td>
<td>12.204 .002</td>
</tr>
<tr>
<td>Knowledge of the role of assertiveness</td>
<td></td>
<td>Chi² p</td>
<td>6,807 .033</td>
<td></td>
<td>16.349 .000</td>
</tr>
<tr>
<td>Knowledge of resistance mechanisms</td>
<td></td>
<td>Chi² p</td>
<td>41.9% (13)</td>
<td></td>
<td>80.0% (16)</td>
</tr>
<tr>
<td>Knowledge of active listening</td>
<td></td>
<td>Chi² p</td>
<td>41.9% (13)</td>
<td></td>
<td>80.0% (16)</td>
</tr>
</tbody>
</table>
and process optimization. Thus, apart from medical expertise and technical excellence, non-technical skills need to be incorporated in trainings [26].

Acute and rapid changes in the patient, the very public view of the care provided, and a need for rapid decision-making by paramedics make deliberation – and after the process of communication, revealing the values and interests of the patient or the patient’s family – a practical impossibility [27]. However, the dynamics of a rescue action cannot be an excuse for avoiding communication with a patient. Despite the pressure of time, a paramedic can never present the impression of someone acting in hurry, but a person ready to give help, also verbal (supporting, providing information) [16].

Literature reports unequivocally emphasize the importance of education for improvement of communication competences, which should not be approached as permanent values. F. Grucza stresses that: both communication competences and interpersonal understanding are of a dynamic character (gradual), and [...] therefore, the produced (possessed) skills, [...] should not be treated as something given once and for all, [...] if one does not care about these skills they simply shrink and finally disappear' [28]. A similar phenomenon is presented by L. Beamer, who considers that in order for the expansion of communication competences through education to bring the desired results, it is necessary to continue the educational process in which communication skills should be developed and fostered [29].

The model of education within professional interpersonal communication proved to be significantly more effective in the improvement of total communication competences than the model of education within general interpersonal communication. In the case of the general model, the observed levels of total competences with respect to motivation, skills and knowledge remained on the level of 50%, while for professional model – on the level of 60%. This indicates that further improvement in educational methods, techniques and educational instruments is necessary in the area of professional interpersonal communication [10].

CONCLUSIONS

Results of own studies indicate that the efficiency of shaping communication competences among paramedic students, based on education within the scope of general psychology only, is relatively low. That kind of knowledge is not spontaneously translated into the anticipated communication competences in the emergency medical services. Moreover, certain communication competences acquired during undergraduate education are subject to regression during occupational activity, and due to occupational stress, are replaced by undesired defence mechanisms, such as psychological resistance or withdrawal.

The method of evaluation of communication competences designed by the authors provides a possibility to diagnose educational needs of occupationally active paramedics, and may be helpful in constructing group and individual educational programmes. The purposefulness of such instruments is confirmed by other studies indicating that the proper approach is to focus on specific communication skills, rather than a general or full suite of communication skills.

The presented results concern the current situation in Poland, where the standards of the education of paramedics places emphasis only on general psychology rather than on professional communication training. One should be aware of the systemic and cultural differences which may considerably limit the scope of experience exchange in such a sphere so sensitive to cultural factors as interpersonal communication. However, it seems that despite international and cultural differences, if there is a lack of practical classes in intra-psychological and intra-communication training, the general psychological and communication knowledge imparted alone, may be used improperly.

In conclusion, a reasonable approach would be to focus on specific communication skills, rather than on a general or ‘full suite’ of communication competences. It is necessary to develop methods of evaluation of communication competences, which diagnose educational needs of occupationally active paramedics, and may be useful in constructing both group and individual continuation of educational programmes. An optimum approach is diagnosing the scope and level of the lack of communication competence, and on this basis, the development of adequate training courses which focus on specific communication skills.

REFERENCES

21. Rozporządzenie Ministra Zdrowia z dnia 14 czerwca 2007 r. w sprawie doskonalenia zawodowego ratowników medycznych.
22. Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 12 lipca 2007 r. w sprawie standardów kształcenia dla poszczególnych kierunków oraz poziomów kształcenia, a także trybu tworzenia i warunków, jakie musi spełniać uczelnia, by prowadzić studia miedzykierunkowe oraz makrokrunkerki.
23. Rozporządzenie Ministra Zdrowia z dnia 14 stycznia 2009 r. zmieniające rozporządzenie w sprawie szczegółowego zakresu medycznych czynności ratunkowych, które mogą być podejmowane przez ratownika medycznego.