ORIGINAL RESEARCH

Long term follow-up on health care professionals' self-efficacy after communication skills training

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Abstract

Introduction: Good communication is commonly recognised to be a precondition for optimal health care and treatment. Nevertheless, serious communication problems are still experienced by patients as well as by health care professionals and therefore an orthopaedic surgery department initiated a three-day communication skills training course for all staff members expecting an increase in patient-centeredness in communication and more respectful inter-collegial communication. The aim of this study is to report the long term effect of communication skills training course on health care professionals' self-efficacy in communication with patients and colleagues.

Method: An intervention study assessing health care professionals' self-efficacy before and eighteen months after having participated in the course using pre-course data as baseline for paired *t*-tests of means. Data were collected by means of questionnaires.

Results: Responses to the 18-months post-course questionnaire were received from 121 participants (93%) showing sustained significant increases in self-efficacy across professions for all questions regarding communication with both patients and colleagues.

Discussion: This long term assessment shows that communication skills training can produce significant and sustainable increases in the self-efficacy of health care professionals in communication with both patients and colleagues.

Key words

Communication, Communication skills training, Self-efficacy, Long term effect

1 Background and context

In daily clinical practice health professional's communication with patients, with relatives and with co-workers is the cornerstone of health service. The importance of effective communication has been stressed by the great amount of communication research emphasizing the association between optimal communication and patient outcomes [1-5]. At the same time, health professionals are facing many challenges because of the emotional distress that can be a consequence of the communication with patients and the cooperation with the different professionals involved in patient care.

Shortage of supervisory support, lack of time among clinicians [6] and lack of self-confidence in communication with patients [7, 8] disclose a need for an increased effort in the area. Otherwise, it may cause avoidance of communication with patients, resulting in the health care professionals not being adequately informed about the patients' concerns [7, 8].

Also the impact of poor inter-collegial communication is well known, as it can cause trouble for health care staff in terms of conflicts, role stress, lack of inter-professional understanding and diminished inter-professional interaction [9, 10]. The importance of this topic is stressed by a study showing that a positive relationship among clinicians seems to contribute to their own well-being, self-awareness and integrity and it has been revealed that these factors are required for entering into positive relationships with others – both patients and colleagues [11]. This has been confirmed by another study which showed that patients were more likely to be satisfied when the relations between doctors and nurses were good [12].

Self-efficacy is widely used for self-assessment of the outcome of communication skills training and has proved to be an efficient and reliable method for monitoring professionals' benefits of attending a communication skills training course [13-17].

Self-efficacy is a key element of social cognitive theory and refers to a person's estimate of her or his ability to perform a specific task successfully [18]. The theory has been supported by research showing that self-efficacy plays a predictive and mediating role in relation to motivation, learning, and performance [19, 20].

At the Department of Orthopaedic Surgery, Kolding Hospital in Denmark an evaluation following a three-day communication skills training course for all staff members showed an increased proportion of satisfied patients [21] and more respectful inter-collegial communication [22]. Furthermore, a significantly increased self-efficacy was reported by the health care professionals in communication with both patients and colleagues.

The aim of this study was to elucidate whether an effect on health care professionals' self-efficacy in communication with patients and colleagues could be detected 18 months after a communication skills training course.

2 Method

This study is a long term follow-up study of an intervention study that took place at the Department of Orthopaedic Surgery, Kolding Hospital in Denmark, during 2008 and 2009.

2.1 Study participants

For all doctors, nurses, nursing assistants and medical secretaries employed at the department for more than 6 months it was compulsory to participate in the training course. Staff members still working at the department 18 months after completing the course were included in this study. Only staff members involved in the research process, either as organizers or teachers, were excluded as they were not considered unbiased.

2.2 The intervention

The intervention was a 2 plus 1 day training course based on Silverman and Kurtz' Calgary-Cambridge Observation Guide. A guide that provided a structure to the interview in order to obtain an effective, patient-centred interview, based on a shared agenda, attentive listening, silence and summarizing [23, 24]. We chose a skill-based training approach with videotaped scenarios, role-plays and simulated communication sequences [25].

The training was conducted by two doctors, one medical secretary and five nurses from the department who had been trained as teachers. Two teachers conducted the classes each consisting of eight students. During two initial course days, the structure and the tools for patient-centered communication and communication with colleagues were presented, alternating with supervised role-plays.

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A six-week interval gave the participants opportunity to practice their new communication tools and to videotape an authentic communication situation with a patient or a colleague before a follow-up day. The video recordings provided the focus for plenary discussions, supervision and personal feedback sessions.

2.3 Data collection

A questionnaire concerning self-efficacy in communication with patients based on Albert Bandura's self-efficacy theory developed and validated by Parle et al. [26], was previously translated into Danish in a two-stage process and used for doctors and nurses in the Department of Paediatrics, Kolding Hospital [14]. This questionnaire was further adapted for the present study and expanded with questions about inter-collegial communication [15]. The questionnaire was structured with eight questions elucidating the health care professionals' perceived self-efficacy in communication with patients and eleven questions concerning communication with colleagues. The answers were rated on a numeric 10-point scale from "Not certain at all" to "Quite certain". The questions are shown in Figure 1a and Figure 1b.

Each informant was asked to fill in the questionnaire four times: before, immediately after, six months after and 18 months after the course. The questionnaires were anonymous but coded so that paired analysis could be done. This study reports the results 18 months after the course.

2.4 Statistical analyses

The measurement before the training course was used as baseline for t-tests of means at the assessment at 18 months. The respondents were divided into four age groups: 20-29 years, 30-39 years, 40-49 years and 50+ years in order to check data for variations related to the respondents' age. A p-value of < 0.05 was chosen as significance level. All statistical analyses were done using Stata (StataCorp. 2001. Statistical Software: Release 12. College Station, TX: Stata Corporation).

2.4 Ethical considerations

The health care professionals were informed by letter about the aims of the questionnaire survey. All personal identifiers were removed or disguised from all data to preclude personal identification. The study was licensed by the Danish Data Protection Agency and needed no further ethical approval.

3 Results

A total of 190 out of 191 possible staff members (99.5 %) completed the course; one refused to participate despite the compulsory status of the course, and was therefore not considered a part of the sample. Of the190 completing the course, 9 were excluded as they were involved in the research process (organizing and teaching) leaving a sample of 181 health care professionals: 21 doctors, 102 nurses, 30 nursing assistants, 17 secretaries and 11 other staff members, including service staff and managers.

3.1 Respondents

Of the 181 participants, 177 answered the questionnaire before and 121 eighteen months after the course. In this report, we have focused on doctors (n=13), nurses (n=73), nursing assistants (n=15) and medical secretaries (n=17). Response rates were 97.8 % (177/181) before and 93 % (121/130) 18 months after the course.

The decreasing numbers of eligible participants are due to resignation or illness. In Table 1 the respondents are shown by gender, age and profession.

3.2 Self-efficacy

With all professions collapsed the increases in self-efficacy from before to after were significant for all questions regarding communication with both patients and colleagues ($p < 0.05$ for all comparisons). The mean (of mean) scores for the different items before and 18 months after the course are illustrated in Figure 1a and Figure1b.

Table 1. Respondents by gender, age and profession (differences in n are due to non-completed questionnaires).

	Men n (%)	Women n (%)	Age <30 n (%)	Age 31-40 n (%)	Age 41-50 n (%)	Age > 51 n (%)
Doctors (n=13)	12 (80.2 %)	1 (9.4 %)	0 (0.0 %)	1 (0.8 %)	3 (2.5 %)	9 (7.4 %)
Nurses (n=72)	1 (6.6 %)	71 (67.0 %)	2 (1.7 %)	22 (18.0 %)	29 (24.0 %)	19 (15.7 %)
Nursing assistants (n=15)	0 (0.0 %)	15 (14.0 %)	0 (0.0 %)	2 (1.7 %)	5 (4.1 %)	8 (6.6 %)
Medical secretaries (n=15)	0 (0.9 %)	15 (14.0 %)	0 (0.0 %)	3 (2.5 %)	6 (5.0 %)	6 (5.0 %)
Other (n=5)	1 (6.6 %)	4 (3.7 %)	0 (0.0 %)	0 (0.0 %)	1 (0.8 %)	4 (3.3 %)
Profession not stated (n=1)	1 (6.6 %)	-	-	-	1 (0.8 %)	-

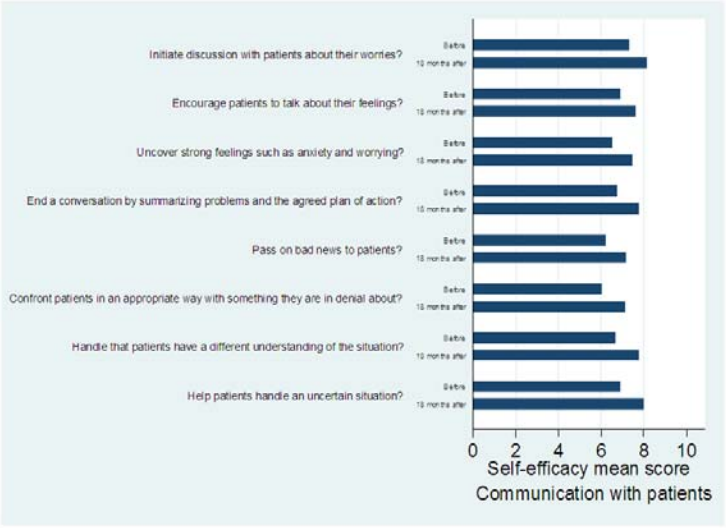

Figure 1a. Mean scores in the health care professionals' self-efficacy in communication with patients before the communication skills training course and eighteen months after the course. The health care professionals were asked: "To which extent do you believe that you successfully can:"

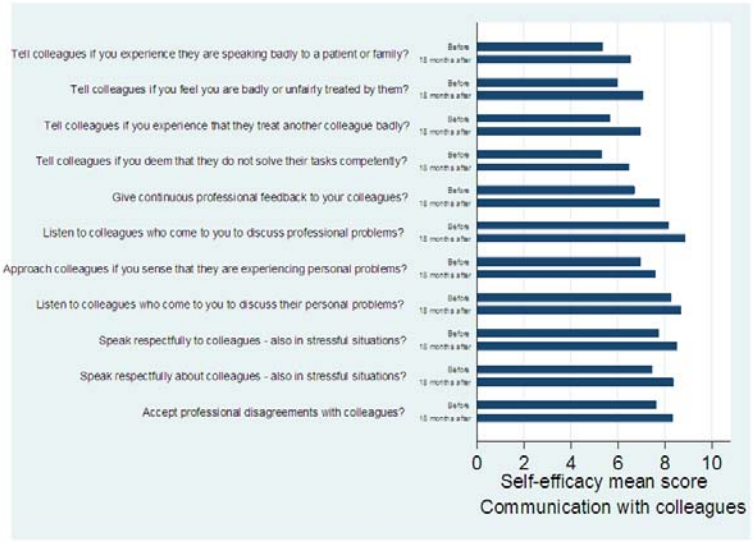

Figure 1b. Mean scores in the health care professionals' self-efficacy in communication with colleagues before the communication skills training course and eighteen months after the course. The health care professionals were asked: "To which extent do you believe that you successfully can:"

Comparing the self-efficacy scores before and eighteen months after the training course the analyses showed significant increased self-efficacy for nurses for all items (19/19), but only for 8/19 items for the nursing assistants. The medical secretaries reported significantly increased self-efficacy in 6/19 items and the doctors in 1/19 items. For two items about

inter-collegial communication the doctors reported a non-significant decrease in self-efficacy). For all remaining items non-significant increases were found for all professions.

The mean of mean scores before and 18 months after the course for communication with patients and colleagues, respectively, are shown by profession in Table 2a and Table 2b.

Table 2a. Self-efficacy in communication with patients.

	n	Before training	18 months after	Difference	*p*
All staff	121	6.71	7.78	0.97	<0.001
Doctors	13	7.66	8.19	0.53	0.07
Nurses	73	6.94	7.86	.92	<0.001
Nursing assistants	15	6.09	7.24	1.15	0.009
Medical secretaries	14	5.33	7.00	1.67	0.02

Note. The table shows the change from before the course to eighteen months after the course in mean of mean scores of self-efficacy in communication with patients (differences in n are due to non-completed questionnaires).

Table 2b. Self-efficacy in communication with colleagues.

	n	Before training	18 months after	Difference	*p*
All staff	121	6.96	7.75	.79	<0.001
Doctors	12	7.23	7.70	.47	0.12
Nurses	71	6.90	7.73	.83	<0.001
Nursing assistants	15	7.52	8.16	.64	0.05
Medical secretaries	17	6.70	7.58	.88	0.004

Note. The table shows the change from before the course to eighteen months after the course in mean of mean scores of self-efficacy in communication with colleagues (differences in n are due to non-completed questionnaires).

The analysis of differences between age groups and gender showed no results of statistical significance, partly due to the collinearity between gender and profession (data not shown).

4 Discussion and conclusion

The aim of improving communication skills of health care professionals is to optimize treatment and to improve patient satisfaction. In order to ensure that the communication training is relevant and gives the required skills it is important to evaluate the effect.

This can and should be done in different ways, such as assessing patients' evaluation of communication [21], or the health care professionals' evaluation of inter-collegial communication [22], each of them clarifying important aspects. But also more indirect methods such as self-efficacy seem to be reliable methods. Self-efficacy has been shown to play a predictive role in relation to behaviour [19, 20]. Furthermore, recent research has demonstrated how communication can contribute to better health outcomes through its effects on proximal and intermediate factors, such as the clinicians' way of communicating [26].

Most studies evaluating the effect of communication training have used controlled designs. They have thus been conducted in narrower settings in order to test the effect under controlled and manageable conditions [27], either by focusing on single professions [8, 28-30], delimited parts of an organization [31], or a training environment separated from the clinical setting [29]. Even though such efficacy studies find communication training to have a positive effect it might not imply that the same effect can be obtained when implementing a communication strategy in an entire department, let alone maintaining an effect over a longer period of time.

A strength of the present effectiveness study is the fact that the management decided to make the training course compulsory for all health care professionals, and therefore both staff members positive and negative to the idea were included. This gave us the opportunity to study whether a positive effect could be found when the intervention was implemented in an entire organization. Previously, we have shown that the staff increased their self-efficacy both in relation to the communication with patients and with colleagues after having participated in the communication training course [15]. The question was then whether this increase would persist.

Despite the fact that the study was performed in a real world setting in which the staff experienced many competing tasks and challenges, this study has demonstrated that the increase in self-efficacy persisted eighteen months after the course indicating that the staff benefitted from the training. These results were probably facilitated by the facts that the course was designed to ensure that the skills learnt were immediately applicable in the health care professionals' clinical practice, was adapted to the local context, and performed by in-house trainers representing all wards and all professions involved. Furthermore, as the teachers were employed in the department they became excellent ambassadors for the communication strategy.

The results regarding communication with patients corroborate the findings of other researchers who have found improved communication skills after training [8, 28, 31, 32]. As reported by Maguire, communication skills should be taught in problem-focused training workshops, using e.g. video recordings for feedback [33]. Maguire's point of view is supported by others; teaching communication skills should be experiential, because instructional methods do not provide the desired results and communication skills learned in a training environment have difficulties in being transferred into the clinical setting [30, 34-36]. Therefore, the training method used could be considered as a strength of the study, and this might have contributed to the durable results, as the skills learnt at the training course were immediately applicable in the health care professionals' clinical practice [37].

The self-rating could be argued to represent a methodological weakness of this study, as it has been pointed out that self-ratings are reactive measures with the measure itself as an influence on the outcome [38], resulting in either overrating or underrating [10]. Although data were tested for a ceiling effect, a test–retest in the internal reliability of the questionnaire would have been desirable. Despite the fact that self-efficacy increased considerably for all professions, it is unknown whether the increased self-efficacy scores led to changes in communication behaviour. However, self-efficacy can be seen as a proxy for the person's skills and thus indicates that the training improved the health professionals' communication skills – also in the long run. This long term assessment shows that communication skills training can produce significant and durable increases in the self-efficacy of health care professionals in communication with both patients and colleagues.

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