

Communication between nurses and simulated patients with cancer: evaluation of a communication training programme

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In this paper the effect of a communication training programme on the instrumental and affective communication skills employed by ward nurses during the admittance interview with recently diagnosed cancer patients was investigated. The training focused on teaching nurses skills to discuss and handle patient emotions. For this purpose, 46 nurses participated in 92 videotaped admittance interviews with simulated patients. The study had a randomized pre-test-post-test design. Multi-level analysis was used to measure the effects of the training. The results revealed that the trained nurses significantly increased asking open-ended psychosocial questions, which indicates that they were actively exploring patients' feelings. Furthermore, the patients showed a significant increase in affective communication. In conclusion, the results of this study demonstrate that, although limited, training can induce favourable changes in the communication skills of nurses, and can even affect patient communication. Future studies should focus on the further evaluation of educational programmes to enhance communication skills.

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Keywords: cancer, nurse-simulated patient interaction, communication training, admission interview, observation study

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Die Kommunikation zwischen Pflegepersonal und simulierten Krebspatienten

In dieser Abhandlung wird die Auswirkung eines Ausbildungsprogramms zur Kommunikation auf die instrumentelle und effektive Kommunikationsfähigkeit von stationärem Pflegepersonal beim Aufnahmegespräch von Krebspatienten mit erstmals diagnostiziertem Krebs untersucht. Das Training konzentrierte sich darauf, dem Pflegepersonal Fähigkeiten zu vermitteln, um die Emotionen der Patienten zu besprechen und zu steuern.

Zu diesem Zweck nahmen 46 Krankenpfleger an 92 Video-Aufnahmegesprächen mit simulierten Patienten teil. Die Studie war willkürlich gestaltet, vor und nach Tests. Die Wirkungen des Trainings wurden durch eine Multilevel-Analyse gemessen. Die Ergebnisse zeigten, dass das so ausgebildete Personal deutlich mehr offene psycho-soziale Fragen stellte, was darauf hin deutet, dass sie die Gefühle der Patienten bewusst erforschten. Darüber hinaus zeigten die Patienten einen deutlichen Anstieg in effektiver Kommunikation.

Die Ergebnisse der Untersuchung beweisen, dass das Training, wenn auch in begrenzter Weise, positive Veränderungen in den Kommunikationsfähigkeiten des Pflegepersonals hervorrufen und sogar die Kommunikation seitens des Patienten beeinflussen kann. Weitere Studien sollten sich auf die weitere Auswertung von Ausbildungsprogrammen zur Förderung der Kommunikationsfähigkeit konzentrieren.

Comunicación entre enfermeros y pacientes simulados con cáncer: evaluación de un programa de capacitación en materia de comunicación

En este trabajo se examinó el efecto de un programa de capacitación en materia de comunicación respecto de las aptitudes importantes y efectivas de comunicación utilizadas por enfermeros de sala durante la entrevista de hospitalización de pacientes con cáncer recientemente diagnosticado. La capacitación se centró en enseñar a enfermeros las aptitudes para tratar y manejar las emociones de los pacientes. A tal efecto, 46 enfermeros participaron en 92 entrevistas de hospitalización grabadas en vídeo con pacientes simulados. El estudio tenía un diseño aleatorizado pre-prueba pos-prueba. Se utilizó un análisis multinivel para medir los efectos de la

capacitación. Los resultados revelaron que los enfermeros capacitados aumentaban significativamente la formulación de preguntas psicosociales de interpretación abierta, lo cual indica que estaban explorando activamente las emociones de los pacientes. Además, estos pacientes mostraban un aumento significativo de la comunicación efectiva. En conclusión, los resultados de este estudio demuestran que la capacitación, si bien limitada, puede inducir cambios favorables en las aptitudes de comunicación e los enfermeros, e incluso afectar la comunicación de los pacientes. Los estudios futuros se deben centrar en la evaluación adicional de programas educativos para mejorar las aptitudes de comunicación.

INTRODUCTION

Providing emotional care, in addition to practical and medical care, is a crucial task in the professional role of the nurse when caring for patients with cancer. Cancer is a life-threatening disease, and medical treatment can have far-reaching consequences. Consequently, many patients seem to experience distress after diagnosis, which may be characterized by fear, anger, anxiety, depression or helplessness (Maguire & Faulkner 1988, Fallowfield 1988, Harrisson et al. 1994). When these patients have to be admitted to hospital for treatment, ward nurses, in particular, are closely involved with patients' concerns as they provide 24-hour care. Accordingly, effective communication is one of the most important aspects of nursing care in an oncology setting, which, according to Wilkinson (1991) is defined as open two-way communication in which patients are informed about the nature of their illness and treatment and are encouraged to express their anxieties and emotions. In line with the research into doctor-patient communication, two types of communicative behaviours employed by nurses seem to be important in meeting the communication needs of patients as defined in this definition. In the first place, these include instrumental behaviours, which are of significance when informing the patient about the illness and treatment, and providing medical and practical services. In the second place, they include affective behaviours, such as showing respect, giving comfort and trust. These are important aspects in building relationships with patients, in which patients have a sense of being understood (Bensing 1991, Hall et al. 1987), and in creating a trustful atmosphere in which patients are helped to disclose information and concerns relating to the confrontation with a life-threatening disease (Wouda & van de Wiel 1996).

Unfortunately, research shows that nurses' communication exhibits more negative or blocking features than positive facilitative ones during interactions with patients with cancer (Kruijver et al., 2000a). An imbalance exists in nurses' use of both types of communication, characterized by an overwhelming medical concern (Dennisson 1995, Webster 1981, Bond 1983) and neglect of the emotional component (Webster 1981, Degner et al. 1991, Heaven & Maguire 1996). These

behaviours are especially viewed by patients as unsupportive behaviours (Krishanamy 1996a), which lead to dissatisfaction (Suominen et al. 1995). The above illustrates that the emotional load in particular is a specific aspect of cancer care that makes communication with patients challenging. In general, nurses appear to be conscious of using distancing tactics. They seem to be afraid of losing control over the situation when not using these tactics (Webster 1981). Consequently, particularly in cancer care, nurses report a need for communication training programmes in which they learn to communicate effectively on emotional issues and psychosocial aspects, and learn how to integrate these issues usefully in delivering medical or technical care in nursing practice (Peteet et al. 1989, Ross et al. 1992).

When reviewing the literature (Kruijver et al., 2000b) it appears that relatively few of these programmes have been evaluated and the majority of these studies utilize a non-randomized research design, which in general is weaker than a randomized design in evaluating the effect of a training intervention. Evaluation studies are useful in gaining insight into the effect of these programmes on nurses' levels of communication skills and other nurse and patient outcomes. Also, an increased focus in research on the evaluation of communication training programmes may increase attention as to the importance of teaching and appraising the relevant skills that are needed to handle emotions in order to optimize the balance between instrumental and affective communication. This, in turn, can lead to an enhancement of the implementation of effective (continuing) education programmes for nurses in cancer care, for which there is a fundamental need.

This paper focuses on the effects of a communication training programme on nurses' communication skills in a clinical oncology setting. The balance, as regards affective and instrumental communication employed by nurses, is particularly important during admission intake/interviews with recently diagnosed patients. At this time, the patient becomes acquainted with the nurse who, in the primary nursing system, will be primarily responsible for the care of the patient during his/her stay in hospital (Ersser & Tutton 1991). The admission interview starts with the

patients' history, in which the nurse gathers information from the patient about medical and lifestyle issues relevant to treatment. The use of exploratory skills, encouraging the patient to respond freely about affective and medical topics, alternating with skills that structure the conversation are, in consequence, important (Wouda & van de Wiel 1996). Another important nursing task during the interview concerns providing clear information about medical issues with regard to treatment, and providing clear information about organizational issues such as ward rules and services during admission (Wouda & van de Wiel 1996).

From the patient's perspective, the admission situation can cause emotional distress, as it follows recent diagnosis of a life-threatening disease, and admission for cancer treatment. In this situation, it is important for the nurse to be able to create an environment of trust, in which the patient feels respected, involved and accepted. In a comfortable environment, the patient is helped to disclose concerns which may relieve him/her. Relief, in turn, may lead to increased concentration, from the patient's side, on the nurse's information and questions asked during the admission interview. In such circumstances, a nurse's ability to adapt the information to the patient's emotional condition is of significance (Krishanamy 1996b, Wouda & van de Wiel 1996).

Aim of the study

The aim of this study was to investigate the effect of a communication skills training programme on affective and instrumental communication employed by ward nurses during the admission interview with recently diagnosed patients with cancer. The research questions addressed in this paper were the following:

- What is the effect of a communication skills training programme on the affective and instrumental communication of ward nurses during the admission interview with recently diagnosed patients with cancer?
- Do ward nurses' communication skills after receipt of training effect the communicative behaviours of recently diagnosed patients with cancer during the admission interview?

METHODS

Training

The underlying assumption of the course was that effective communicative behaviours of nurses would facilitate their interaction with patients with cancer. This, in turn, will benefit

patients who experience psychosocial problems due to the life-threatening disease, as well as the nurses themselves. Acquired skills will enable nurses to increase their stability and control in handling emotionally laden situations, thereby facilitating their primary task. This will lead to increased problem assessment, emotional support and problem solving (Wouda & van de Wiel 1996). The total length of the training was 18 hours. Nurses were taught communication skills for 6 days in periods of 3 hours. The group consisted of 10–15 participants, and training was conducted by two trainers experienced in clinical patient care. In addition to theoretical education, there was feedback in role-playing sessions. In this way, the participants learned how to handle problems they experienced in practice interactively. Every lesson finished with a practical homework assignment, to be accomplished in the work field or at home. More detailed information is presented in Appendix 1.

Design and sample

Effects of the training were measured using a randomized pre-test/post-test control group design. In total, 53 registered (ward) nurses from different medical specialisms in three hospitals in the Netherlands started the project. During the course of the study, seven nurses dropped out. Reasons given were: illness/pregnancy ($n=4$), not motivated anymore ($n=1$) and another job ($n=2$). The remaining 46 nurses completed the pre-test, the training and the post-test. The experimental group consisted of 25 nurses who had participated in the training, and the control group consisted of 21 nurses who intended to participate in the training later on (after the study). All the nurses had experience of caring for patients with cancer. Three hospitals participated: two university hospitals and one general hospital. Nurses were recruited from 11 wards consisting of the following medical specialisms: gynaecology, urology, surgery, internal medicine/haematology and the ear-nose-throat diseases. Randomization took place at ward level. In Table 1, several background characteristics of the nurses are presented. There were no significant differences between the experimental and control group with regard to the background characteristics.

Simulation

Simulated patients were used to answer the research question addressed. The advantage of the simulated patient technique is that it directly assesses nurses' communication skills that are important during the daily performance in nursing practice. Further, there is an elaborate and standardized script, allowing nurses to test

Table 1 Background characteristics of the participating nurses (n=46)

	Experimental group (n=25)	Control group (n=21)	P
GENDER	12%	19%	$\chi^2 = 0.44$
man	88%	81%	Df=1
woman			P=0.51
AGE			
mean age	33 years	31 years	t=85 Df=44 P=0.39
EDUCATIONAL LEVEL			
HBO (Dutch higher educational level)	71%	65%	$\chi^2 = 0.17$
MBO (Dutch secondary educational level)	29%	35%	Df=1
missing	4%	5%	0.68
mean years of employment	12 years	10 years	t=0.73 Df=44 P=0.47
mean years of employment in oncology	5 years	5 years	t=0.45 Df=43 P=0.25

To test the differences in background characteristics, t-tests and χ^2 analysis were used.

their skills. This improves comparability between nurses.

In total, three actors participated. The actors were trained professionals who acted as recently diagnosed patients with cancer who had arrived at the ward for admission. The actors were instructed to play patients in the script, which was developed specifically for this study. In order to write a realistic and elaborate script including significant elements to test the nurses' skills, an oncologist, an oncology nurse and a cancer patient screened the script for authenticity.

The script involved a female cancer patient in middle age, who was going to be admitted for cancer treatment. The treatment had a curative purpose. The underlying emotions of being confronted with a life-threatening disease, such as resistance, anger, denial and anxiety, formed a central theme of the script.

The script was standard for each nurse but small adaptations were made for each medical specialism. The participating nurses within the different medical specialisms are comparable since patients experience similar emotions after being diagnosed, regardless of the kind of the disease, and the admission procedure within the different medical disciplines is the same.

Assessment

Prior to the training and then one month after, each nurse participated in a videotaped admission interview with an actor. Participating nurses were instructed to go through the admission procedure with the simulated patient in the same way they did on the ward with actual patients. The interviews with the simulated patients lasted 20 minutes. After 20 minutes, the procedure was

interrupted. The nurses didn't have to finish the admission procedure.

Observation scheme

Affective and instrumental communication

The 92 (46 pre- 46 post-test) videotaped admission interviews with simulated patients were observed using the Roter Interaction Analysis System (RIAS) (Roter 1989). In this system, a distinction is made between instrumental or task-related and affective or socio-emotional verbal communication. The Roter Interaction Analysis System was originally designed to code both doctor and patient communication, but has also proved to be reliable with respect to the observation of nurse-patient interactions (DeGruyter & Schirm 1995, Caris-Verhallen et al. 1998).

In this study, some small adaptations were made, tailored to the nurse-patient interaction in a clinical oncology setting. The adapted version included 32 behavioural categories for the nurse and 27 behavioural categories for the patient (see Tables 2 and 3). Each utterance was coded into one of the instrumental or affective categories, which are mutually exclusive. An utterance is a communication unit which conveys one thought, or is related to one specific interest. The total length of one utterance varies from one word to a sentence.

Instrumental communication consists of the categories (which contain all items concerning nursing and medical topics), items about the organization on the ward and services, and verbal expressions about lifestyle issues and psychosocial topics. Furthermore, instrumental communication consists of categories that indicate guidance and direction through the

Table 2 Percentages of nurses' verbal instrumental communication at pre- and post-measurement

	experimental group (n=25)		control group (n=21)	
	pre	post	pre	post
orientations/instructions	2.6	1.5	3.2	1.3
asks for clarification	0.3	0.2	0.2	0.2
asks for understanding	0.9	0.2	0.7	0.1
asks for opinion	0.6	0.7	0.7	0.6
<i>closed question</i> :	4.5		5.1	4.2
medical/therapeutic items	0.5	4.1	0.3	0.2
hospital/ward items	3.1	0.1	2.9	2.3
lifestyle items	5.1	2.8	4.1	2.9
psycho-social/feelings**		4.8		
<i>open questions</i> :				
medical/therapeutic items	1.3	1.4	0.6	0.8
hospital/ward items	—	—	—	—
lifestyle items	—	—	0.1	—
psycho-social items/feelings**	2.1	3.0	1.3	1.3
total open questions*	22.9	27.0	13.7	18.3
total closed questions*	77.1	73.0	86.3	81.7
<i>information</i> :				
medical/therapeutic items*	21.8	23.1	25.5	31.3
hospital/ward items	4.8	5.5	5.5	4.0
lifestyle items	0.2	0.2	0.4	0.6
psycho-social items/feelings	11.7	10.5	11.2	10.7
<i>counseling</i> :				
medical/therapeutic behaviour	0.5	0.1	0.2	0.2
lifestyle behaviour and feelings	1.3	0.9	0.9	0.8
other	0.3	0.2	0.2	0.3
Total instrumental utterances	61.6	58.9	62.7	61.5

The meaning of the *is as follows: the difference between pre- and post-test in the experimental group is significant different from the difference between pre- and post-test in the control group * $P < 0.05$, ** $P < 0.01$.

Table 3 percentages of nurse' verbal affective communication at pre- and post-measurement

	experimental group (n=25) %		control group (n=21) %	
	pre	post	pre	post
Affective				
personal remarks/social conversation	2.1	2.3	3.1	2.2
jokes/laughs	0.3	0.3	0.2	0.1
approval	0.2	0.3	0.1	0.1
compliments	—	—	—	—
shows concern/worry	1.4	1.7	1.6	2.1
shows agreement/understanding	19.4	20.4	18.7	21.7
paraphrase/check	11.1	10.7	8.8	8.4
empathy/legitimize	1.7	2.1	2.2	1.5
reassurance/encouragement/optimism	1.8	3.0	2.1	2.3
shows partnership	0.2	0.3	0.3	0.1
disapproval	—	—	—	—
criticism	—	—	—	—
asks for reassurance	—	—	—	—
Total affective utterances	38.4	41.1	37.3	38.5

The meaning of the *is as follows: the difference between pre- and post-test in the experimental group is significant different from the difference between pre- and post-test in the control group * $P < 0.05$, ** $P < 0.01$.

conversation, such as orientation and instructing, requests for clarification, asking for an opinion or checking for understanding (see Table 2).

During the history-taking stage of the admission, the use of open questions is important in exploring, when alternated with closed questions (among others requests for clarification) in order to get supplementary information. During the information-giving stage of the admission, conversation and the use of skills that structure the information (for example, providing orientation) is significant. It is also important to avoid

monologues. This can be achieved by using skills that involve the patient during information-giving, e.g. by asking the patient if he/she understands the information, and by asking for the patient's opinion and experience.

Affective communication consists of the categories, which refer to those aspects needed to establish trusting relationships between nurses and patients in order to facilitate information exchange. Additionally, affective communication refers to nurses' social conversations that have no particular function in nursing activities, such as personal statements and jokes (see Table 3).

During the admission procedure in particular, affective communication is important in encouraging the patient to disclose concerns. Examples of affective behaviours are paraphrases, showing concern, showing empathy, showing optimism and understanding. These behaviours convey respect, attention and intimacy, and provide companionship and encouragement (Krishnasamy 1996b, Roter 1989, Wouda & van de Wiel 1996). We also observed five affective non-verbal nurse behaviours, which appear to be important in the establishment of the nurse-patient relationship, including patient-directed gaze, affirmative nodding, smiling, leaning forward and affective touch (Heintzman et al. 1993, Caris-Verhallen et al. 1999). These behaviours convey involvement, closeness, friendliness and attentiveness. They are not necessary in performing nursing tasks, but do facilitate the verbal interaction between nurses and patients (see Table 4).

Reliability of the observations

The affective and instrumental communication between nurses and cancer patients was observed by two independent raters directly from video recordings using the CAMERA computer system, which is especially designed to code observed behavioural interactions from video recordings (Iec ProGAMMA 1994).

Pearson's product-moment correlation coefficients were used to measure the inter-observer reliability, based on 10 interviews of the total number of videotaped admission conversations. Two observers rated the same 10 interviews. The inter-observer correlations for the verbal instrumental behaviours by nurses and patients ranged from 0.59 to 0.94 (patients' giving psychosocial information: 0.59; the other nurse and patient categories: ranging from 0.68 to 0.94). For the verbal affective behaviours the inter-observer correlations ranged from 0.54 to 0.94 (nurses' empathy: 0.54; nurses paraphrasing: 0.61; the other nurse and patient categories: ranging from 0.65 to 0.94). Inter-observer reliability was not measured for the non-verbal utterances by nurses

and patients, which took up less than 2% of the time.

The inter-observer correlations for nurses' non-verbal affective behaviours ranged from 0.66 to 0.86. The non-verbal behaviours, forward leaning and affective touch, were performed too rarely by the nurses to allow measurement of inter-observer reliability. The content validity and discriminant validity of the RIAS proved to be satisfactory (Ong. et al. 1989).

Power analysis

The population size of the nurses has been based upon a power analysis. Relationships have been shown between training interventions and improved communication skills, measured with RIAS, with an effect size between medium and high (Roter et al. 1995). Fixing the effect size also medium to high ($d=0.65$), using a one-tail significance test ($\alpha=0.05$), a sample size of 2×30 will result in an acceptable power coefficient of 0.800. The mentioned power and effect size for the nurse population indicate that effects stand a fairly small chance of going undetected.

In fact, we recruited 53 registered (ward) nurses who were willing to participate in the study. During the course of the study, seven nurses dropped out. The remaining 46 nurses completed the pre-test, the training and the post-test. The power coefficient, based on these 46 nurses, is slightly low, namely 0.67.

Statistical analysis

Percentages were calculated of the communication behaviours as the frequency of nurses' and patients' communicative utterances within the specific instrumental and affective categories were proportionate to the total number of verbal utterances.

Statistical analysis was carried out in the following way: change scores (post-test minus pre-test) were calculated of the percentages of the nurses and simulated patients of the communication behaviours in experimental as well as in control conditions. ANCOVA analysis was used

Table 4 Nurses' non-verbal communication behaviours at pre- and post-measurement

Non-verbal behaviour	experimental group (n=25) %		control group (n=21) %	
	pre	post	pre	post
<i>percentages</i>				
patient directed gaze	88.6	90.4	86.4	91.4
<i>frequencies</i>				
affirmative head nodding	179	20.3	22.0	26.0
smiling	4.3	2.8	3.3	1.4
forward leaning	1.4	0.31	1.1	0.3
affective touch	0.5	0.6	1.0	0.5

to test whether the nurses and simulated patients in the experimental condition had significantly changed instrumental and effective communication behaviours as a result of the training, compared with the untrained group of nurses and their patients. More precisely, we tested whether the difference pre- and post-test of the trained nurses was significantly different from the difference pre- and post-test in the control group. As a result of some of the pre-test scores of the experimental and control group appearing to be significantly different from each other, the pre-test scores were used as covariates in the analysis. Before the above analysis, we tested to see if there were any interaction effects between the experimental conditions and the covariates (pretest scores) and the dependent variables (change scores) in communication behaviours as this is a prerequisite for analysis of covariance. Finally, ANCOVA was used in a multi-level framework as a control for the effect of nurses being nested within wards, and wards being nested within the hospitals. The analyses were performed in MIn software (Rasbash & Woodhouse 1995).

RESULTS

Multi-level analysis revealed that nurses' communication was not affected by nurses being nested within wards, and wards being nested within the hospitals.

The first research question concerned the effect of the training on nurses' communication behaviours. The percentages of nurses' verbal communication behaviour during pre- and post-test, calculated for the experimental and control group separately, are displayed in Tables 2 and 3.

The ratio of instrumental versus affective communication was evaluated first. At the foot of Tables 2 and 3, it is shown that the instrumental and the affective communication of the trained nurses remained the same after the training. This indicates that this ratio did not change significantly at post-test measurement. Looking to the occurrence of nurses' communication behaviours within the affective and instrumental categories, the results reveal that some significant changes in nurses' instrumental communication behaviours occurred at post-test measurement.

It appeared that the trained nurses asked significantly more open questions in the psychosocial domain. Their closed psychosocial questions did not change at post-test while the nurses in the control group asked, in turn, significantly fewer closed psychosocial questions. Looking to nurses' total open and closed-ended question asking, it appeared that while both groups of nurses showed an increase in open questions at

post-test, the increase within the untrained group of nurses was stronger. This was contrary to our expectations. Table 2 also demonstrates that the amount of information given on medical topics by the trained nurses remained more or less the same, while the untrained nurses significantly increased information provision at post-test measurement.

As regards affective communication, the difference score in the pre- and post-test of the trained nurses did not change significantly from the difference score of the untrained group of nurses. Yet the trained nurses made considerably more encouraging and optimistic remarks, which is important in dealing with the feelings of distressed people, and showed increased empathic behaviour ($P < 0.06$) at post-test measurement. However, none of the test statistics reached significance level. As regards nurses' non-verbal communication, no significant alterations at post-test measurement were found. (Table 4).

The second research question concerned the impact of the skills of the trained ward nurses on the communicative behaviours of the simulated cancer patients during the admission/intake interview. In order to answer this research question, the ratio of patients' instrumental versus affective communication was also first evaluated.

At the foot of Table 6 we show that the total number of the simulated patients' affective utterances in the experimental condition had increased significantly. This indicates that the ratio of instrumental versus affective communication changed significantly at post-test measurement.

More detailed analysis of patient communication within the different categories revealed that at post-measurement, the patients in the experimental condition decreased in the giving of medical information whereas the patients of the untrained nurses increased in the giving of medical information (Table 5).

Favourable shifts within affective categories also occurred, although the differences did not reach statistical significance. It appeared, for example, that the trained nurses' patients expressed concerns considerably more at post-test measurement, compared with the group of untrained nurses (Table 6).

DISCUSSION

In this study, the effects of a communication training programme on nurses' instrumental and affective communication skills during simulated cancer patient admission assessment interviews were investigated. Although the ratio of instru-

Table 5 Percentages of patients' verbal instrumental communication at pre- and post-measurement

	experimental group (n=25) %		control group (n=21) %	
	pre	post	pre	post
orientations/instructions	—	—	—	—
asks for clarification	0.2	—	0.2	0.2
asks for understanding	—	—	—	—
asks for opinion	—	—	—	—
questions				
medical/therapeutic items	4.3	4.8	6.1	6.6
hospital/ward items	0.6	0.6	0.9	0.4
lifestyle items	0.1	0.1	0.1	0.2
psycho-social items/feelings	1.2	0.5	0.6	0.5
information				
medical/therapeutic items**	16.0	14.5	17.2	20.0
hospital/ward items	0.8	0.1	0.9	0.3
lifestyle items	11.0	12.0	10.9	11.1
psycho-socials item/feelings	29.4	26.8	24.4	25.1
other	0.3	0.2	0.2	0.2
Total instrumental utterances*	63.8	59.5	61.5	64.5

The meaning of the *is as follows: the difference between pre- and post-test in the experimental group is significant different from the difference between pre- and post-test in the control group * $P < 0.05$, ** $P < 0.01$.

Table 6 Percentages of verbal affective communication at pre- patients' and post-measurement

	experimental group (n=25) %		control group (n=21) %	
	pre	post	pre	post
personal remarks/social conversation	3.8	3.8	4.3	3.0
jokes/laughs	0.3	0.1	—	1
approval	0.2	0.3	0.2	—
compliments	—	—	—	0.1
shows concern/worry	10.1	14.8	9.6	12.7
shows agreement/understanding	19.0	20.0	20.2	16.6
paraphrase/check	1.9	0.5	2.3	1
empathy/legitimize	—	—	—	—
reassurance/encourage/optimism	0.2	0.2	0.2	0.2
shows partnership	—	—	—	—
disapproval	0.1	—	0.2	0.2
criticism	0.1	0.1	0.3	0.1
reassurance	0.6	0.8	1.1	1.3
Total affective utterances*	36.2	40.5	38.5	35.5

The meaning of the *is as follows: the difference between pre- and post-test in the experimental group is significant different from the difference between pre- and post-test in the control group * $P < 0.05$, ** $P < 0.01$.

mental versus affective communication of the trained nurses at post-test measurement remained the same, more significant changes were found within specific categories of communication. With respect to nurses' instrumental behaviours, open psychosocial questions had increased significantly. Furthermore, in contrast to the untrained nurses, the trained nurses did not significantly increase the amount of medical information given at post-test measurement.

These results were limited, but beneficial when placed in the context of the aims of the training programme, and in the context of the required communication skills of the nurses during the admission interview. Training focused on teaching the nurses facilitative communication skills in order to deal with the emotions of cancer patients. The assumption underlying the training was that the skills acquired for communicating about emotions effectively with cancer patients

(instead of using distancing tactics) would enable nurses to increase their own feelings of control in dealing with emotionally fraught situations, thereby supporting patients by facilitating expression of their concerns.

The increased amount of open psychosocial questions indicated that the trained nurses were less focused on their medical agenda, in the sense that they were more able to alternate giving medical information with open questions in the psychosocial domain which use exploring skills that facilitate and encourage patients to tell their story, enhancing problem assessment and solving. This is favourable since the professional actor played a patient who was very distressed and concerned after being confronted with a life-threatening disease. Research shows that in such circumstances, in particular, an overwhelming medical concern on the nurses' side leads to dissatisfaction among cancer patients (Suominen et al. 1995).

Shifts in the affective domain at post-test did not occur. This is in a sense disappointing, since affective behaviours, such as showing empathy, showing concern and manifesting optimism, appear to be of great significance in creating a trusting atmosphere in which distressed cancer patients are helped to express concern. Although not significant, the trained nurses showed improvement in two of these important affective behaviours at post-measurement: they increased their encouraging and optimistic remarks, and their emphatic behaviour.

No significant alterations were found after the training with respect to the non-verbal affective communication. This is dissatisfying since non-verbal behaviours, in particular, are considered to be important in conveying warmth and interest and in establishing good relations with the patient (Heintzman et al. 1993). Patient-directed gaze did not significantly change at post-test measurement, and was already high in both groups of nurses. The high percentage of patient-directed gaze in this study can be explained by the fact that nurse and patient were sitting at a table in front of each other. Nursing activities during the admission interview were mainly characterized by information exchange. Nurses therefore used a great part of the time for patient-directed gaze.

Patients' communication behaviours were also investigated in order to assess the impact of the communication skills of the trained ward nurses on the communicative behaviours of the simulated cancer patients during the admittance interview. The ratio of instrumental versus affective communication behaviour of the patients revealed that patients' affective communication had increased significantly at post-test measurement.

These findings indicate that the favourable changes in patient communication were a consequence of the major effect of the training, namely an increase in the facilitative behaviours of the trained nurses within instrumental communication, reflecting the shift from a primary focus on exchanging bio-medical information to an increased focus on discussion of psychosocial topics, which encourage patients to tell their story.

A further detailed analysis of patient communication within the different instrumental and affective categories revealed that at post-measurement the patients in the experimental condition gave significantly less medical information. Further, they showed favourable alterations in the affective domain, although the differences did not reach statistical significance. However, the fact that the ratio of affective versus instrumental communication of the trained nurses remained the same implies that the favourable shifts in the communication of patients, as described in the

results, took place within nurses' medical agenda which predominates and which determines the course of the interactions with cancer patients.

All in all, we see some favourable but limited changes after the training. The limited effects on nurses' communication skills in this study accord with the studies as described in the literature, measuring effects of training programmes for nurses in oncology care with audio or videotapes. Faulkner and Maguire (1984) found that after the training, nurses improved in the use of relevant interviewing techniques and in assessing patients' problems. From the studies by Booth et al. 1996 and Heaven et al. 1996, however, it appeared that after training, nurses were no better at identifying the concerns of cancer patients. In general, the more disclosure of feelings by the patient, the more blocking behaviours from nurses occurred. Booth found only one significant small improvement in nurses' use of open direct questions. Further, results of the Booth's study showed a weak improvement of nurses' assessment skills after the training. Maguire (1988) found no significant effect of the training on nurses' communication skills.

Hitherto, a golden standard as regards the balance of using instrumental/affective communication during interactions with cancer patients has not been established. Investigators of recent nursing studies present their results more in terms of 'an overwhelming medical concern' or distancing tactics or blocking behaviours, indicating an imbalance in both types of communication and lacking in an emotional component. It seems to be clear that balance reflects the provision of medical and practical care, which is the primary task of nurses, integrated with the provision of emotional care.

The ratio of instrumental/affective communication of nurses as found in this study agrees with this ratio, as found in other studies using RIAS (van Dulmen 1998, van den Brink-Muinen 1996). These studies, however, took place in an out-patient paediatric setting (van Dulmen 1998), in a general (women's) health-care setting (van den Brink-Muinen 1996) and in concerned interactions between physicians and patients. An exception is the study of Caris-Verhallen et al. (1998) who investigated the communication between nurses and elderly people. Affective behaviour occurred more often in that study (48% in home care and 63% in institutional care).

METHODOLOGICAL ISSUES

The power of the sample in our study was slightly low, namely 0.67. It is possible that the limited changes after the training are a conse-

quence of the sample size which, in fact, was smaller than we calculated for reasons of difficulties with getting a large enough sample. If the sample had been larger, changes may have been detectable.

This research is part of a randomized pre-test-post-test study in which the effects of training with actual patients are being measured in addition to the simulated method. The simulated patient method used in this study has the advantage that variations among patients may be reduced as a consequence of a standardized situation. The disadvantage of this method is that there is no 'real life' situation, which may lead to artificial interactions, and that other patient outcomes (e.g. quality of life) can't be measured. However, up till now the validity of the simulated patient method has scarcely been investigated in nursing research. In current medical and nursing research in this area a distinction is frequently made between 'competence' as an outcome variable, measured with simulated patients, and 'performance' as an outcome variable, measured with real or actual patients (Rethans et al. 1991, Francke et al. 1991, Pieters et al. 1994, Ram et al. 1999). Competence concerns the level at which a health-care provider is capable of performing a skill, and performance as how a health-care provider actually performs a skill in day-to-day practice (Pieters et al. 1994). Competence comprises knowledge, skills and attitudes (Rethans et al. 1991), which are usually considered important mediators in daily practice (Francke et al. 1995). An interesting topic of research would be further investigation of the validity of working with the simulated patient method. This could enlarge our insight into the extent to which communication skills of nurses, as measured with simulated patients, are representative of communicative behaviours with actual patients in day-to-day practice. We are currently conducting a study in this area.

Another interesting research question concerns the extent to which such communication training programmes can induce changes in real-life situations as well. In other words, what is the effect of a communication training programme on interactions between nurses and actual cancer patients? We are currently conducting a study in which the effects of a training with actual patients are being measured.

Finally, an intensified focus on investigating and evaluating the effects of educational training in communication skills should occur in the future in order to increase attention paid to the importance of the communicative balance between instrumental and affective communication in nursing care for cancer patients. This, in turn, can lead to reinforcement in the implementation of effective (continuing) education programmes

for nurses in patient care, for which there remains a fundamental need.

ACKNOWLEDGEMENT

This study was financed by the Dutch Cancer Foundation.

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APPENDIX I

The content of the communication training program

During every meeting the skills were taught according to a regular schedule, which consisted of the following elements:

- a test of the theory;
- a short discussion of the assigned homework and the theoretical background of the current lesson;
- instruction regarding the objective of skills and how to use them;
- demonstration of the skills;
- practising the skills by means of role playing and homework assignment (this is an exercise which has been taught during the course and will be applied to a home or work situation).

The oncological and communicative themes to be taught during the training program were the following:

Day 1

During the first lesson the participants were taught the basics of the communication theory, in order to get more insight into the question: 'What is communication?'

Also several psychosocial aspects regarding the confrontation with cancer were discussed, such as the life threatening character of the disease and the emotional and physical burden of the treatment.

Day 2

During the second lesson the emotional consequences of cancer were discussed, such as coping with the loss of health, and emotions like anxiety, depression, anger, guilt shame etc.

Participants also received insight in separate communication skills, which are considered basic elements of a conversation. These include the non-directive communication skills on the one hand, such as eye contact, posture, verbal atten-

tiveness, (open) question asking, silence, etc; and the more directive or controlling skills on the other hand, such as paraphrasing, emotional reflection, summarizing, concretizing, own expression etc.

Day 3

During the third lesson, attention was paid to handling patients' emotions. Also the participants got an insight into the structure of a conversation; for example the different phases of a conversation such as the introduction, the middle part and the end of the conversation, and the use of appropriate skills during the different phases.

Day 4

During the fourth lesson, patient education was a central theme.

The participants received an insight into how to structure the information with which they provide patients. Relevant counselling skills, which can be used during the provision of patient information, were also taught.

Day 4

During the fifth lesson resistance of oncology patients was taught, such as 'irrational thoughts'. Nurses got an insight into different therapeutic techniques, focused on handling resistance (such as challenging, rewarding/punishing).

Day 6

During the sixth lesson, resistance of nurses themselves was a central theme. The participants got an insight into how to deal with their own resistance regarding emotionally laden situations, such as caring for terminally ill cancer patients.

Follow up

After two months, there was a follow up meeting in which the training was evaluated by the members of the course, and where the participants still got the opportunity to acquire communication skills by means of role playing exercises.