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The quality of patient-nurse communication perceived before and during the COVID-19 pandemic: an Italian pilot study

Elsa Vitale¹, Maria Pia Giammarinaro², Roberto Lupo³, Rosa Silvia Fortunato⁴, Valeria Archetta⁵, Cosimo Caldararo⁶, Francesco Germini⁷

¹Department of Mental Health, Local Health Authority Bari, Italy; ²Bed Management, Arnas Civico, Palermo, Italy; ³San Giuseppe da Copertino hospital, Lecce, Italy; ⁴Department of Mental Health, Local Health Authority Bologna, Italy; ⁵Borgo San Nicola Penitentiary Institute, Lecce, Italy; ⁶University of Bari, Lecce headquartes, Italy; ⁷Direction of Health Professions, Local Health Authority Bari, Italy

Abstract. *Background and Aim of the work.* Therapeutic communication is essential for assessing the quality of patients' care. The present study aimed to assess how the forced use of the mask influenced the communication before and during the Covid-19 pandemic. *Methods.* An online questionnaire was administered including two socio-demographic items, such as sex, as male and female, and role, as nurse or patient, and the Quality of Communication Questionnaire (QOC) for twice, referring to the period before and during the pandemic. *Results.* 178 subjects participated in the study, of which 60 (33.7%) were patients and 118 (66.3%) were nurses. During the pandemic, patients reported no significant differences in the perception of the quality during the pandemic period than before. *Conclusions.* The patient willingly accepted the use of the face mask unlike nurses considered it a further obstacle to an effective communication between nurse-patient. However, it could be considered the emotional and caring overload that each nurse had stored during the Covid-19 pandemic, in addition to the fear of contagion that had gripped the lives of nurses on a daily basis.

Key words: communication, covid-19, nurses; patients.

Introduction

Therapeutic communication is essential for assessing the quality of care of patients (1). Since the time of Florence Nightingale (2), the nurse-patient communication has assumed an increasingly predominant role in the effectiveness and efficiency of care: effective nurse-patient communication has positive effects on the perception of health of patients, on quality of care processes received and clinical outcomes including decreased anxiety, guilt, pain, disease symptoms (3,4). In the context of nurse-patient communication there are a series of components to consider, as communication itself is already a complex process of exchanging information, thoughts, moods, symbols and behaviors (5). The literature agrees that effective nurse-patient communication undoubtedly reflects positively on the patient's perception and positive evaluation of the quality of care provided and on the entire system connected to it (6-13). Furthermore, in the communication process it is equally important to consider the non-verbal aspect of the communication itself which provides just as much information to the nurse for the patient data collection (14).

Furthermore, the non-verbal aspect of communication takes on an even more important role in

emergency conditions, where the time dedicated to verbal communication in general is already almost irrelevant in itself, leaving greater importance for the use of non-verbal language (15). Therefore, the literature suggests how important is a nursing approach based on the medical nature of the patient (16) and on effective communication between nurse-patient, capable of influencing the quality of the services received and the perception of one's own pathology (17,18). However, evidence suggested that many nurse-patient communication approaches depend heavily on the personal characteristics of nurses, as well as on their levels of education and not on a common standard that all nurses possess in basic patient communication skills (19,20). If we add to all this the condition of health emergency due to the Covid-19 pandemic and the forced use of the face mask as an individual protection device for the containment of the SARS-CoV-2 infection, the question that arises spontaneously is: how is the quality of communication between nurses-patients perceived during the period of the pandemic? And therefore, the use of the face mask has negatively influenced the nurse-patient communication especially because the use of this device has considerably reduced the messages deriving from the non-verbal communication channel?

Aim

The present study aimed to evaluate how nurses and patients perceived the forced use of the face mask as an element of protection from the SARS-CoV-2 infection in the nurse-patient relationship and therefore, if the use of the mask had positively or negatively influenced this communication.

Materials and Methods

Research procedure and Participants

In the months of March 2020 and April 2020 an online questionnaire was addressed and administered to nurses and patients to evaluate their perception of the quality of nurse-patient communication and how the latter was influenced by the forced use of face mask as an anti-contagion device to Covid-19. The questionnaire was developed through the google function, as: GOOGLE MODULES. For the recruitment of nurses, some pages and nursing groups present on the following Facebook and Instagram pages were reached, as: #noisiamopronti, Nurse health professional, Professional nurse, Nurses by passion, Nurse-Times, Nurse24.it, Nurse Specialist, Nurseallface, Nursing research, NursesInProgress, Nurses, Active Nurses, Nurses Italy, Nurses supporting health, Nursing Mobility, Nursing Competitions, Informed Nurses (Instagram). While, for patients' recruitment only general Facebook and Instagram pages were used. The questionnaire was filled in anonymously. All the sample, including both nurses and patients, was is randomized and the only aspect considered for enrollment was the willingness of the participants to agree and so to answer the online questionnaire.

The Questionnaire

An online questionnaire created ad hoc containing two socio-demographic items, such as sex, as male and female, and role, as nurse or patient. In the second part, the Quality of Communication Questionnaire (QOC) (21) was administered for twice, in order to refer to the period before the pandemic, as before December 2019 and during the pandemic, referring to March and April 2020. The QOC was made up of 17 items which were associated with a value scale from 1 to 5, as indicated the frequency "never" and the value 5 the frequency "very often". The 17-items included concerning:

- 1. Using words, you understand
- 2. Looking in your eye
- 3. Including loved ones in treatment discussions
- 4. Answering all questions about illness
- 5. Listening to what you have to say
- 6. Caring about you as a person
- 7. Giving full attention
- 8. Talk about your feelings of contracting the disease
- 9. Talking about details if you got sicker
- 10. Talking about how long you have to live
- 11. Talking about what dying might be like

- 12. Talking with loved ones about what dying might be like
- 13. Involving you in treatment discussion about your care
- 14. Asking about important things in life
- 15. Respecting important things in your life
- 16. Asking about spiritual, religious beliefs
- 17. Respecting spiritual, religious beliefs

For each item considered in the QOC, it was possible to find out what quality of nurse-patient communication was perceived by both the nurse and the patient in the period before and during the Covid-19 pandemic. So, for each answer given, a summary-answer score was created ranging from 1 to 5 in order to quantify the quality perception on the patient-nurse relationship before and during the Covid-19 pandemic (22).

Data assessment

Data were collected in an Excel data sheet and processed thanks to the SPSS version 20. Data concerning demographic variables, as participants' role and sex were presented as frequencies and percentages and all the QOC items' scores were presented as means and standard deviations. t-test for paired samples was calculated between the responses given at before and during between patients and nurses and 95% confidence intervals were reported. Finally, a multivariate analysis of the data between nurses and patients and between before and during the pandemic was assessed. All p values <.05 were considered statistically significant.

Results

A total of 178 subjects participated in the study, of which 60 (33.7%) were patients and 118 (66.3%) were nurses (Table 1).

Considering the differences in responses between patients in the periods before and during the pandemic (Table 2) it could be seen that there was no statistically significant difference between the two moments, therefore it was highlighted that from the point of view of patients the quality of nurse-patient communication had not undergone significant alterations during the pandemic, despite the forced use of the face mask as an individual protective device from Covid-19 pandemic.

On the other hand, significant differences between the two time periods considered in the nurse-patient relationship were evidenced among nurses (Table 3). For items: "Use words you understand" (p=.008); "Include loved ones in the discussion of therapeutic treatment" (p<.001); "Answer your questions concerning the disease" (p=.007); "Listen to what you have to say" (p<.001); "Take care of yourself as a person" (p<.001); "Discuss details if you got sick" (p=.040); "Get involved in therapeutic discussions about your care" (p=.023), which substantially concerned the discussion and the answers to be provided to the patient on his therapeutic-assistance plan, there were statistically significant differences: nurses considered these aspects of the communication with their interlocutor, the patient, less satisfactory in the period during the pandemic than in the period before the pandemic itself. Therefore, nurses considered for these aspects reported in the questionnaire the nurse-patient communication less effective due to the unconditional use of the face mask.

Considering as a whole the values of the QOC questionnaire and the relative responses provided by patients and nurses, relating to the periods before and during the Covid-19 pandemic (Table 4), significant differences were highlighted between nurses and patients in relation to multiple items of the questionnaire, namely: "Use words you understand" (<.001); "Look you in the eye" (<.001); "Answer all questions concerning the disease" (p=.004); "Listen to what you

 Table 1. Sampling characteristics (n=178).

Variables	Patients (n;%)	Nurses (n;%)	Total (n;%)
Sex: Female Male Total	34 (19.10%) 26 (14.60%) 60 (33.7%)	104 (58.43%) 14 (7.87%) 118 (66.3%)	138 (77.5%) 40 (22.5%) 178 (100%)

QOC Items	Before µ±s.d.	During µ±s.d.	C.I. 95%	p value
1. Use words you understand	2.916±1.109	2.716±1.109	063463	.135
2. Look you in the eye	3.000±1.149	2.933±1.191	170303	.576
3. Include loved ones in the discussion of therapeutic treatment	2.983±1.214	2.750±1.360	123590	.196
4. Answer all questionsconcerning the disease	3.250±1.216	2.966±1.234	091658	.136
5. Listen to what you have to say	3.167±1.044	3.150±1.218	341374	.926
6. Take care of yourself as a person	3.217±1.151	3.216±1.151	180380	.478
7. Pay full attention	3.150±1.161	3.183±1.268	334267	.825
8. Talk about the feelings about itthe worsening of the disease	3.050±1.141	2.800±1.259	071571	.125
9. Discuss details if you got sick	3.133±1.185	2.766±1.332	001734	.051
10. Talk about how much time you have left to live	2.533±1.281	2.433±1.125	188388	.490
11. Talk about what it should be like to die	2.400±1.264	2.367±1.134	222289	.795
12. Talk to loved ones about howit could be dying	2.333±1.099	2.466±1.241	378111	.280
13. Get involved in therapeutic discussionsabout your care	2.733±1.117	2.800±1.204	381248	.673
14. Ask questions about the important things in life	2.783±1.222	2.750±1.283	271337	.827
15. Respect the important things in life	3.066±1.273	2.883±1.263	096462	.194
16. Ask about spiritual and religious beliefs	2.600±1.251	2.450±1.185	122422	.275
17. Respect spiritual and religious beliefs	2.966±1.372	2.717±1.354	045545	.096

Table 2. QOC assessment in patients "Before" and "During" the Covid-19 pandemic.

Abbreviations: µ: mean; s.d.: standard deviation; *p<0.05 is statistically significant

Table 3. QOC assessment in nurses	"Before" and	"During" the	Covid-19 pandemic.
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QOC Items	Before µ±s.d.	During µ±s.d.	C.I. 95%	p value
1. Use words you understand	3.786±1.094	3.634±1.191	.400263	.008*
2. Look you in the eye	3.730±1.081	3.601±1.222	017275	.084
3. Include loved ones in the discussion of the rapeutic treatment	3.376±1.154	2.629±1.322	.517977	<.001*
4. Answer all questionsconcerning the disease	3.578±1.067	3.320±1.199	.071445	.007*
5. Listen to what you have to say	3.814±1.027	3.505±1.165	.145472	<.001*
6. Take care of yourself as a person	3.961±0.999	3.651±1.203	.157460	<.001*
7. Pay full attention	3.786±1.041	3.786±1.109	149149	1.000
8. Talk about the feelings about itthe worsening of the disease	3.376±1.114	3.213±1.197	034360	.106
9. Discuss details if you got sick	3.348±1.125	3.157±1.274	.008373	.040*
10. Talk about how much time you have left to live	2.646±1.222	2.477±1.208	014351	.071
11. Talk about what it should be like to die	2.382±1.284	2.421±1.242	213134	.656
12. Talk to loved ones about howit could be dying	2.348±1.258	2.410±1.317	254130	.528
13. Get involved in therapeutic discussionsabout your care	3.140±1.386	2.938±1.231	.028376	.023*
14. Ask questions about the important things in life	2.966±1.243	3.000±1.239	229161	.734
15. Respect the important things in life	3.528±1.184	3.382±1.257	018311	.082
16. Ask about spiritual and religious beliefs	2.961±1.277	3.062±1.370	273071	.248
17. Respect spiritual and religious beliefs	3.640±1.214	3.539±1.365	046248	.178

Abbreviations: μ : mean; s.d.: standard deviation; *p<0.05 is statistically significant

have to say" (p<.001); "Take care of yourself as a person (p<.001); "Pay full attention" (p<.001); "Talk about the feelings" (p=.002); "Discuss details if you got sick" (p=.022); "Get involved in therapeutic discussions about your care" (p=.013); "Respect the important thing in life" (p=<.001); "Ask about spiritual and religious beliefs" (p<.001); "Respect spiritual and religious beliefs" (p<.001). On the other hand, by considering the periods before and during the pandemic the only one differences among patients and nurses recorded on the QOC questionnaire was "Include loved ones in the discussion of therapeutic treatment" (p<.001).

Discussion

The present study wanted to highlight whether there were differences in the perception of the quality of nurse-patient communication following the Covid-19 pandemic and above all the consequent forced use of the face mask as an individual protection device for the containment of the pandemic. Surely, the expected data would have included greater differences in the perception of the quality of nurse-patient communication considering the point of view of patients, even before that of nurses. From the recorded data, however, no significant difference was highlighted in the perception of the quality of communication by patients:

no significant difference was highlighted in the perception of the quality of communication by patients: the latter in fact did not report different data in their assessments in the two periods, therefore it could be inferred that the patient's face mask was not considered a barrier in the therapeutic communication with the nurse. On the other hand, nurses recorded significant differences in many aspects of the perception of the quality of communication with the patient, especially regarding the aspects inherent in the explanation and discussion of therapeutic communication. For nurses, the face mask was considered a barrier, an impediment to effective communication with the patient. In the literature studies comparable to this both for purpose and method were not available, therefore the present study could be considered as pilot in this sense. On the other hand, in the literature, there were multiple studies that emphasized the importance for nurses

Table 4. Multivariate analysis between patients and nurses before and during the Covid-19 pandemic.

QOC Items	F	p value ^a	F	p value ^b
1. Use words you understand	94.863	<.001*	2.049	.153
2. Look you in the eye	55.018	<.001*	.327	.568
3. Include loved ones in the discussion of the rapeutic treatment	1.215	.271	13.205	<.001*
4. Answer all questionsconcerning the disease	8551	.004	3.492	.062
5. Listen to what you have to say	21.518	<.001*	1.389	.239
6. Take care of yourself as a person	37.903	<.001*	2.461	.118
7. Pay full attention	35.314	<.001*	.028	.866
8. Talk about the feelings about itthe worsening of the disease	9.488	.002	2.387	.123
9. Discuss details if you got sick	5.333	.022	2.835	.093
10. Talk about how much time you have left to live	.023	.880	.885	.348
11. Talk about what it should be like to die	.135	.714	.004	.952
12. Talk to loved ones about howit could be dying	.388	.534	.238	.626
13. Get involved in therapeutic discussionsabout your care	6.192	.013	.402	.527
14. Ask questions about the important things in life	2.726	.100	.071	.790
15. Respect the important things in life	18.564	<.001*	.853	.356
16. Ask about spiritual and religious beliefs	12.308	.001*	.022	.882
17. Respect spiritual and religious beliefs	36.340	<.001*	.867	.352

p value ^a: Multivariate Analysis between Patients and Nurses; p value ^b: Multivariate Analysis between before and during the pandemic; *p<0.05 is statistically significant.

of non-verbal communication as a learning method for more information about the patient, especially essential in the treatment of patients in an emergency regime (23-25). This channel of communication was absolutely irrelevant in the period of the pandemic due to the forced use of the face mask. Therefore, there was inherently a physical barrier to non-verbal communication which allowed less information to be collected about the patient. Furthermore, the period of the pandemic has been described by numerous studies as a period of additional work overload for nurses (26-30) compared to normal conditions (31) and certainly this situation has even less predisposed the nurse to listening and therapeutic communication. In this regard, an Iranian study (32) reported that the job dissatisfaction, the routine-centered care and the trust to nurses from patient views were the most frequent barriers to effective communication (33,34). Furthermore, other concomitant factors that did not favor the quality of nurse-patient communication were reported in the overburdening of nursing work and subsequent fatigue, as well as the limited availability of time available to communicate with patients (25,35). In light of what has been reported in the literature, data recorded in this study could therefore find an explanation for all

this: nurses certainly during the pandemic were experiencing an unprecedented work overload (26-30) and, therefore, found it more difficult to communicate with their patients due to increasingly longer scarce and the physical barrier of the face mask which made communication even more difficult. In support of this, there was another aspect contemplated in the literature (36): in emergency conditions, nurses attributed greater importance to the care of the patient's physicality, of his disease, not worrying in the least about the relational aspect that would require more time to layout.

Therefore, it was evident from the causes described in the literature that they could be directly correlated with the data reported in the present study that nurses perceived the face mask as an impediment, a barrier to effective communication with their patients. On the other hand, the patient did not report any difficulties, perhaps because it was strictly connected to the state of necessity that the mask had in itself in this period of the Covid-19 pandemic. Furthermore, the difficulties exposed by nurses for communication could be connected to the level of emotional and physical overload that the nurse was experiencing during this pandemic period (26-30).

Conclusions

In the light of the data that emerged in the present study, it could be assumed that the patient willingly accepted the use of the face mask unlike nurses considered it a further obstacle to an effective communication between nurse-patient. Although, data were collected only online and there was no form of iteration with the participants, both for nurses and patients. Furthermore, the major flaw of this study was the sampling and retroactive evaluation of mask less communication, which might have been influenced by patients' memories in their hospital stay on the one hand and by the daily experience of nurses, on the other hand. However, the study, albeit with some limitations, helped to highlight a further factor present in nurse-patient communication, such as the forced use of the face mask. Additionally, it could be considered the emotional and caring overload that each nurse had stored during the Covid-19 pandemic, in addition to the fear of contagion that had gripped the lives of nurses on a daily basis. In this regard, therefore, it would be useful if since university training there was greater attention to nursing training in the management of health emergencies in order to better prepare future nurses who might face such emergency situations (37,38).

Conflicts of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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Correspondence:

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Elsa Vitale Department of Mental Health,

Local Healthcare Company Bari, Italy

Via X marzo, 43, 70026 Modugno, Bari

E-mail: vitaleelsa@libero.it