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 headquarter, 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 of nurse-patient communication. While nurses recorded a lower perception of communication 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, NurseTimes, 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).

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

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 2. QOC assessment in patients “Before” and “During” the Covid-19 pandemic.

| 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   | -.063--.463      | .135    |
| 2. Look you in the eye                                                    | 3.00±1.149    | 2.933±1.191   | -.170--.303      | .576    |
| 3. Include loved ones in the discussion of therapeutic treatment         | 2.983±1.214   | 2.750±1.360   | -.123--.590      | .196    |
| 4. Answer all questions concerning the disease                           | 3.250±1.216   | 2.966±1.234   | -.091--.658      | .136    |
| 5. Listen to what you have to say                                        | 3.167±1.044   | 3.150±1.218   | -.341--.374      | .926    |
| 6. Take care of yourself as a person                                     | 3.217±1.151   | 3.216±1.151   | -.180--.380      | .478    |
| 7. Pay full attention                                                     | 3.150±1.161   | 3.183±1.268   | -.334--.267      | .825    |
| 8. Talk about the feelings about the worsening of the disease            | 3.050±1.141   | 2.800±1.259   | -.071--.571      | .125    |
| 9. Discuss details if you got sick                                       | 3.133±1.185   | 2.766±1.332   | -.001--.734      | .051    |
| 10. Talk about how much time you have left to live                       | 2.533±1.281   | 2.433±1.125   | -.188--.388      | .490    |
| 11. Talk about what it should be like to die                             | 2.400±1.264   | 2.367±1.134   | -.222--.289      | .795    |
| 12. Talk to loved ones about how it could be dying                       | 2.333±1.099   | 2.466±1.241   | -.378--.111      | .280    |
| 13. Get involved in therapeutic discussions about your care              | 2.733±1.117   | 2.800±1.204   | -.381--.248      | .673    |
| 14. Ask questions about the important things in life                     | 2.783±1.222   | 2.750±1.283   | -.271--.337      | .827    |
| 15. Respect the important things in life                                 | 3.066±1.273   | 2.883±1.263   | -.096--.462      | .194    |
| 16. Ask about spiritual and religious beliefs                            | 2.600±1.251   | 2.450±1.185   | -.122--.422      | .275    |
| 17. Respect spiritual and religious beliefs                              | 2.966±1.372   | 2.717±1.354   | -.045--.545      | .096    |

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.

| 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   | .400--.263       | .008*   |
| 2. Look you in the eye                                                    | 3.730±1.081   | 3.601±1.222   | -.017--.275      | .084    |
| 3. Include loved ones in the discussion of therapeutic treatment         | 3.376±1.154   | 2.629±1.322   | .517--.977       | <.001*  |
| 4. Answer all questions concerning the disease                           | 3.578±1.067   | 3.320±1.199   | .071--.445       | .007*   |
| 5. Listen to what you have to say                                        | 3.814±1.027   | 3.505±1.165   | .145--.472       | <.001*  |
| 6. Take care of yourself as a person                                     | 3.961±0.999   | 3.651±1.203   | .157--.460       | <.001*  |
| 7. Pay full attention                                                     | 3.786±1.041   | 3.786±1.109   | -.149--.149      | 1.000   |
| 8. Talk about the feelings about it the worsening of the disease         | 3.376±1.114   | 3.213±1.197   | -.034--.360      | .106    |
| 9. Discuss details if you got sick                                       | 3.348±1.125   | 3.157±1.274   | .008--.373       | .040*   |
| 10. Talk about how much time you have left to live                       | 2.646±1.222   | 2.477±1.208   | -.014--.351      | .071    |
| 11. Talk about what it should be like to die                             | 2.382±1.284   | 2.421±1.242   | -.213--.134      | .656    |
| 12. Talk to loved ones about how it could be dying                       | 2.348±1.258   | 2.410±1.317   | -.254--.130      | .528    |
| 13. Get involved in therapeutic discussions about your care              | 3.140±1.386   | 2.938±1.231   | .028--.376       | .023*   |
| 14. Ask questions about the important things in life                     | 2.966±1.243   | 3.000±1.239   | -.229--.161      | .734    |
| 15. Respect the important things in life                                 | 3.528±1.184   | 3.382±1.257   | -.018--.311      | .082    |
| 16. Ask about spiritual and religious beliefs                            | 2.961±1.277   | 3.062±1.370   | -.273--.071      | .248    |
| 17. Respect spiritual and religious beliefs                              | 3.640±1.214   | 3.539±1.365   | -.046--.248      | .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: 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 oftherapeutic 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           | <.001*          | 3.835           | .093            |
| 9. Discuss details if you got sick              | .023            | .880            | .885            | .348            |
| 10. Talk about how much time you have left to live | .135            | .714            | .004            | .952            |
| 11. Talk about what it should be like to die     | .388            | .534            | .238            | .626            |
| 12. Talk to loved ones about howit could be dying | 6.192           | .013            | .402            | .527            |
| 13. Get involved in therapeutic discussionsabout your care | 2.726           | .100            | .071            | .790            |
| 14. Ask questions about the important things in life | 18.564          | <.001*          | .853            | .356            |
| 15. Respect the important things in life        | 12.308          | .001*           | .022            | .882            |
| 16. Ask about 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.

**Author’s contribution:** Conceptualization, methodology, software validation, data curation formal analysis, writing-original draft preparation and writing-review and editing: V.E.; data collection: G.M.P., L.R., F.S., G.F.; writing-review: A.V., C.C., G.F. All authors have read and agreed to the published version of the manuscript.

**References**

1. American Nurses Association. Correctional nursing scope and standards of practice. Silver Sping: MD: American Nurses Association; 2013.
2. Council on Scientific Affairs AMA. Good care of the dying patient. JAMA 1996; 275: 474–478.

3. Li H, Ang E, Hegney D. Nurses’ perceptions of the barriers in effective communication with inpatient cancer adults in Singapore. Journal of Clinical Nursing 2012; 21(17-18): 2647–2658.

4. Cossette S, Cara C, Ricard N, Pepin J. Assessing nurse-patient interactions from a caring perspective: Report of the development and preliminary psychometric testing of the Caring Nurse-Patient Interactions Scale. International Journal of Nursing Studies 2005; 42(6): 673–686.

5. Alshammari M, Duff J, Guilhermino M. Barriers to nurse-patient communication in Saudi Arabia: an integrative review. BMC Nurs. 2019; 3(18):61.

6. McCormack LA, Treiman K, Rupert D, Williams-Piehota P, Nadler E, Arora NK, Lawrence W, Street RL Jr. Measuring patient-centered communication in cancer care: a literature review and the development of a systematic approach. Soc Sci Med. 2011;72(7):1085–95.

7. Treiman K, McCormack L, Olmsted M, Roach N, Reeve BB, Martens CE, Moultrie RR, Sanoff H. Engaging patient advocates and other stakeholders Alshammari et al. BMC Nursing (2019) 18:61 Page 9 of 10 to design measures of patient-centered communication in cancer care. Patient Centered Outcomes Res. 2017;10(1):93–103.

8. Treiman K, McCormack L, Wagner L, Roach N, Moultrie R, Sanoff H, Bann C, Street RL Jr, Ashok M, Reeve BB. Factors affecting the communication experiences of newly diagnosed colorectal cancer patients. Patient education and counseling; 2018.

9. Blanch-Hartigan D, Chawl N, Beckjord EI, Forsythe LP, de Moor JS, Hesse BW, Arora NK. Cancer survivors’ receipt of treatment summaries and implications for patient-centered communication and quality of care. Patient Educ Couns. 2015;98(10):1274–9.

10. Washington GT. The theory of interpersonal relations applied to the preceptor–new graduate relationship. J Nurs Prof Dev. 2013;29(1):24–9.

11. Senn JF. Peplau’s theory of interpersonal relations: application in emergency and rural nursing. Nurs Sci Q. 2013;26(1):31–5.

12. Sheldon LK. Communication for nurses: talking with patients. United States: Jones & Bartlett Learning; 2009.

13. Bello O. Effective communication in nursing practice: a literature review; 2017.

14. Sherk E, Sotiri E, Lika E. Therapeutic communication. JAHR. 2013;4(7):457–66.

15. Montgomery CL. Healing through communication: the practice of caring: Sage; 1993.

16. Watson, J. Human Caring Science: A Theory of Nursing, 2nd ed.; Jones and Bartlett Learning LLC.: Sudbury, MA, USA, 2012; pp. 17–30.

17. Tu JV, Porter J: Stroke Care in Ontario: Hospital Survey Results, Institute for Clinical Evaluative Sciences.; 1999.

18. Burgio LD, Stevens A, Burgio KL, Roth DL, Paul P, Gentle J. Teaching and maintaining behavior management skills in the nursing home. Gerontology 2002; 42(4):487–496.

19. Genereux S, Julien M, Larfeul C, Lavoie V, Soucy O, Le Dorze G. Using communication plans to facilitate interactions with communication-impaired persons residing in long-term care institutions. Aphasology 2004; 12:1161–1175.

20. Small JA, Gutman G, Makela S, Hillhouse B: Effectiveness of communication strategies used by caregivers of persons with Alzheimer’s Disease during activities of daily living. J Speech Lang Hear R 2003; 46(2):353–367.

21. Castanhel FD, Grosseman S. Quality of Communication Questionnaire for COPD patients receiving palliative care: translation and cross-cultural adaptation for use in Brazil. J Bras Pneumol. 2017; 43(5):357–362.

22. Cecere LM, Reinke LF, Ganzini L., Udris EM, Moss BR. Patient-physician communication associations with important health outcomes among veterans with COPD. Chest. 2010;138(3):628–634.

23. Swasey M.L., Physician, and Patient Communication: A Grounded Theory Analysis of Physician and Patient Web-Logs (doctoral dissertation, southern Utah University. Department of Communication; 2013.

24. Alvarez G, Coiera E. Interdisciplinary communication: an uncharted source of medical error? J Crit Care. 2006;21(3):236–42.

25. Patton, M. Q. Qual Res & evaluation methods: Integrating theory and practice (4th ed.). Thousand oaks, CA: Sage; 2015.

26. Vitale E, Galatola V, Mea R. Exploring within and between gender differences in burnout levels in Italian nurses engaged in the Covid-19 health emergency: a cohort observational study. Minerva Psichiatr. 2020; 61(4):162–70.

27. Vitale E, Mea R, Di Dio F, Canonicca A, Galatola V. Anxiety, Insomnia and Body Mass Index scores in Italian nurses engaged in the care of COVID-19 patients. Endocr. Metab. Immune. Disord. Drug Targets 2020: 20:1. Epub ahead of print.

28. Vitale E, Galatola V, Mea R. Observational study on the potential psychological factors that affected Italian nurses involved in the Covid-19 health emergency. Acta Biomed for Health Professions 2021; 92(2): e2021007.

29. Vitale E, Casolaro S. Anxiety, Burnout and Depression levels according to sex and years of work experience in Italian nurses engaged in the care of Covid-19 patients. Journal of Evidenced-Based Psychotherapies 2021; 21(1): 83–96.

30. Vitale E, Galatola V, Mea R. Knowledge on the COVID-19 pandemic and the nursing role influence anxiety and depression levels: a descriptive correlational study between nurses and general population. Journal of Psychopathology 2021;27:115–121.

31. Vitale E, Cesano E, Germini F. Prevalence of Burnout among Italian Nurses: a descriptive study: Italian Nursing Burnout. Acta Bio Med 2020; 91(4): e2020117.

32. Skea ZC, MacLennan SJ, Entwistle VA, N’Dow J. Communicating good care: A qualitative study of what people print.
33. Mack N, Woodsong C, MacQueen KM, Guest G, Namey E. Qualitative research methods: a data collector’s field guide; 2005.
34. Noble H, Smith J. Issues of validity and reliability in qualitative research. Evidence-Based Nursing 2015; ebnurs-2015.
35. Fakhr-Movahedi A, Rahnavard Z, Salsali M, Negaran-deh R. Exploring Nurse’s Communicative Role in Nurse-Patient Relations: A Qualitative Study. Journal of Caring Sciences. 2016;5(4):267-276.
36. Teutsch C. Patient-doctor communication. Med Clin N Am. 2003;87(5):1115–45.
37. Vitale E. Clinical teaching models for nursing practice: a review of literature. Prof Inferm. 2014; 67(2):117-25.
38. Vitale E, Moretti B, Noternicola A, Covelli I. How the Italian Nursing students deal the pandemic Covid-19 condition. Acta Biomed. 2020 Nov 30;91(12-S):e2020007.

Correspondence:
Received: 2 February 2021
Accepted: 2 July 2021
Elsa Vitale Department of Mental Health,
Local Healthcare Company Bari, Italy
Via X marzo, 43, 70026 Modugno, Bari
E-mail: vitaleelsa@libero.it