Adaptation and validation of the Ethical Conflict Nursing Questionnaire-Critical Care Version into the Italian context: a psychometric study

Loris Bonetti [1,2], Stefano Terzoni [3], Paolo Ferrara [3], Anne Destrebecq [4], Esperanza Zuriguel-Perez [5], Anna Falcó-Pegueroles [6]

[1] Nursing Research Competence Centre, Department of Nursing, Ente Ospedaliero Cantonale (EOC), Bellinzona, Switzerland. [2] University of Applied Sciences and Arts of Southern Switzerland, Department of Business Economics, Health and Social Care. [3] San Paolo Bachelor School of Nursing, San Paolo teaching hospital – ASST Santi Paolo e Carlo, Milan, Italy. [4] University of Milan, Department of Biomedical Sciences for Health, Milan, Italy [5] Multidisciplinary Nursing Research Group. VHIR. Hospital Vall d'Hebron, Barcelona, Spain. [6] Department of Fundamental Care and Medical-Surgical Nursing. School of Nursing. Faculty of Medicine and Health Sciences. Consolidated Research Group SGR 269 Quantitative Psychology. University of Barcelona, Spain.

Abstract. *Background and aim of the work.* Ethical conflict in Intensive Care Unit (ICU) can lead to poor quality health care and attention. Knowing the level of exposure to ethical conflict in health professionals allows to design strategies for improve the ethical environments and making decisions process. To study ethical conflict in health professionals it is necessary to have valid and reliable instruments that can be applied to different health and cultural contexts. No instruments existed in Italian context still now. Therefore, the aim of this study was to adapt and validate the Ethical Conflict Nursing Questionnaire-Critical Care Version (ECN-Q-CCV) to the Italian sociocultural context. *Methods.* This is a two-phase psychometric study, including one translation-back-translation phase, and an analysis phase for determining the content and construct validity, by means respectively Content Validity Index, Principal Component Analysis (PCA) and Confirmatory Factor Analysis(CFA), and reliability of the instrument, by means Cronbach's α calculation. *Results.* The sample included 286 nurses from critical care units of four hospitals in MIlan (Italy). Translation-back-translation phase was successful. A Content Validity Index of 95.39 was obtained. The overall Cronbach's α value was 0.866. When an item was eliminated, this value oscillated between 0.871 and 0.881. As the original tool, Principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA) confirmed a single factor capable of explaining more than 30% of the variance. *Conclusions.* The ECNQ-CCV Italian version is a valid and reliable instrument for measuring the exposure of ICU nursing professionals to ethical conflict.

Keywords: ethical conflict, intensive critical care, moral distress, questionnaire, reliability, validity, nurse

Introduction

Ethical conflict in the field of health has been analysed with different approaches and methodologies for decades. Moral dilemmas, anguish, uncertainty or even moral indignation are different types of conflict that limit the ability to make good decisions due to the difficulty of carrying out an action when you do not know or you cannot choose the option considered morally correct.(1) This can lead to poor quality health care and attention. It can also have an economic impact because treatments can be duplicated or decisions

can be postponed, making it difficult to properly manage the available health resources. The latest scientific and technological advances, the interpersonal nature of health relationships and the ethical responsibilities resulting from caring for people are undoubtedly key elements in generating ethical conflict.

In this context, professionals who care for critically ill patients are especially vulnerable as they are exposed to greater ethical conflict. Azoulay *et al.*(2) carried out an international multicentre study, including Italy, and found that 70% of ICU professionals experienced conflicts of various kinds in their services, some of which had ethical roots, such as the influence of care pressure on the quality of healthcare and work dynamics, communication problems and care at the end of life. Other studies have highlighted conflictive situations related to informed consent, confidentiality, therapeutic futility, decisions to limit life support treatment, inadequate pain control, the limited participation of nurses in decision-making, and discrepancies between professionals.(2–11) Most of the instruments that explore concepts related to ethical conflict analyse it based on potentially conflictive situations and research the ethical discomfort these situations generate in the subjects.(1,12–14) A smaller number of instruments also have items that reflect on ethical conflict that is not specifically associated with particular clinical situations.(15,16) A large proportion of these studies have been carried out in Anglo-Saxon and North American contexts, and there have been fewer studies in other countries.

In the specific case of Italy, there are still few studies that analyse the phenomenon of ethical conflict in critical health professionals. However, the study by Lusignani et al.(7) stands out. These authors concluded that there was a moderate level of moral distress in their sample and observed that this level was related to the administration of treatments considered aggressive and that did not represent a benefit for the patients. Even so, there are no papers that explore ethical issues from a broad perspective that goes beyond analysing the intensity of conflict experienced or that explore types of conflict other than moral distress.

Therefore, we analysed ethical conflict in the field of critical patient care in Italy based on the Falcó-Pegueroles(1,5,17) model of exposure to conflict. To make the model operational in this context, it was necessary to adapt the Ethical Conflict Nursing Questionnaire-Critical Care Version (ECNQ-CCV) to the Italian language and sociocultural context as a preliminary step towards measuring the levels and analysing the characteristics of ethical conflict. This model explores the exposure to ethical conflict that results from a combination of the temporal frequency and intensity of the conflict. It considers four types of ethical conflict and two moral states: moral wellbeing and moral indifference. The ECNQ-CCV has proven to be a reliable and valid instrument in different cultural settings, including Spain,(17) Portugal,(18) Iran,(19) and the United States.(20)

Aim

The aim of the present study was to adapt and validate the ECNQ-CCV to the Italian sociocultural context.

Method

Study design

Psychometric study carried out in two phases: one translation-back translation phase and an analysis phase for determining the validity and reliability of the instrument.(21)

Description of the instrument

The Ethical Conflict Nursing Questionnaire-Critical Care Version (ECNQ-CCV), originally created in Spanish and with a Cronbach's α value of 0.882 (1,17), is made up of 19 potentially conflictive situations from an ethical perspective. These situations are divided into three groups: relationships with professionals, users and family members; clinical treatments and procedures; and service dynamics and work environment. The questionnaire makes it possible to analyse the following variables: a) frequency with which each situation occurs, with a Likert-type scale ranging from "never" to "at least once a week", from 0 to 5 points; and b) the intensity of ethical conflict generated by the situation, with a Likert scale ranging from "not problematic" to "very problematic", from 0 to 5 points. By combining these two variables, a) and b), we

obtain a third variable: the index of exposure to ethical conflict (IE_{CE}), which ranges from 0 to 475. A high score is related to a high level of ethical conflict. Finally, a fourth variable is the type of conflict and moral state, which includes moral uncertainty, moral dilemma, moral distress, moral outrage, as well as the moral states, moral wellbeing and moral indifference. In the questionnaire there is a definition of each of the terms to guide the participant's choice in each case.

Setting and sample

The sample was made up of professional nurses who worked in adult critical care units of four university hospitals associated with the University of Milan. Two out of four were University Hospitals. Following a non-probabilistic sample criterion, nursing professionals from the ICU and the Emergency Service were invited to participate. The sample size was calculated based on a desired potential of 80% and a probability of type I error of 5%. Based on literature,[22] to perform Explorative Factor Analysis and Confirmative Factor Analysis, a sample from 5 to 15 for each item is needed. Therefore, a sample ranged from 95 to 285 questionnaires was considered enough for this study. The criteria for inclusion in the sample were people considered to be a nursing professional who had more than six months clinical experience in the ICU. Professionals in training and those who did not have a contractual relationship with the participating institution were excluded.

Validation process

Forward and back translation

The study procedure followed the Standards for Educational and Psychological Testing (23) in the translation-back-translation phase. The ECNQ-CCV_0 was translated into Italian by two nurses with an advanced level of both Italian and Spanish. The translated version was back-translated by two native Spanish professionals who are bilingual in Spanish and Italian. This version was approved by the original author. A form was added to the ECNQ-CCV Italian version to collect sociodemographic data, such as sex, age, training, service, shift, years worked and experience in the ICU.

Content validity

Content validity was analysed using the Content Validity Index.(24) A total of eight ICU and emergency nursing professionals, four women and four men, with more than ten years of experience in these services, analysed the instrument, obtaining a CVI of 95.39, which is considered a very satisfactory score. We called the questionnaire the ECNQ-CCV Italian version, and administered it to the sample under study (Table 1). It was distributed in the ICU and Emergency services and collected in mailbox-type boxes to ensure that the responses could not be seen by third parties.

Statistical analysis

The data were analysed by first carrying out a descriptive analysis by calculating frequencies and percentages as well as the mean and confidence intervals for the quantitative variables. Second, the internal coherence and construct validity were calculated based on the IE_{CE} variable using the Cronbach's coefficient, values greater than 0.70 were considered to be satisfactory,(22) as well as a principal component factor analysis (PCA) and confirmatory factor analysis (CFA). A marginal structural equation was used for the CFA, adjusting the items for maximum likelihood, considering values close to 1 as satisfactory.

Ethical considerations

The study followed the principles of the Helsinki Declaration and the Italian legal framework in relation to confidentiality and data protection. The study obtained the authorizations from the Directors of the participating centres and the Ethics Committee for Clinical Research. All participants gave their written informed consent prior to completing the questionnaire.

Results

Demographic characteristics

A total of 286 professionals participated in the study, 63.5% (n = 179) were women, with a mean age of 37.82 ± 8.57 years. A total of 62.1% (n=177) worked on the shift from Monday to Friday in the mornings and/or afternoons, 25.4% (n=72) had a professional

Table 1. Ethical Conflict Nursing Questionnaire – Critical Care Version Italian version

	Area	Potentially conflicting situations from an ethical perspective
S1	T&CP	Somministrare trattamenti e/o effettuare esami che considero non necessari perché utili solo per prolungare un processo terminale irreversibile
S2	P&F	Dover gestire trattamenti e/o eseguire procedure senza che il paziente critico cosciente sia consapevole degli obiettivi, benefici e rischi di questi..
S3	DS&WE	Prendersi cura di un paziente che penso non dovrebbe essere ammesso all'unità critica, ma in una unità operativa non intensiva.
S4	P&F	Mettere in atto interventi che diano priorità agli interessi del servizio o dell'organizzazione sanitaria rispetto agli interessi del paziente.
S5	P&F	Non rispettare la riservatezza dei dati clinici del paziente quando sono condivisi con il personale che non lo assiste direttamente o con altri
S6	P&F	Somministrare trattamenti e/o mettere in atto interventi senza che la famiglia conosca obiettivi, benefici e rischi (quando il paziente dà il suo consenso per essere informato).
S7	T&PC	Constatare che il trattamento analgesico e/o sedativo somministrato al paziente non è sufficientemente efficace e che il paziente sta soffrendo
S8	DS&WE	Utilizzare tutte le risorse tecniche e/o umane del servizio, nonostante si creda che le condizioni del paziente ricoverato in area critica/d'urgenza non miglioreranno in modo significativo.
S9	DS&WE	Lavorare con personale medico che considero professionalmente incompetente.
S10	P&F	Gestire trattamenti e/o realizzare interventi seguendo i desideri dei parenti, nonostante questi desideri vadano contro gli interessi del paziente.
S11	T&CP	Gestire trattamenti e/o realizzare procedure troppo aggressive in relazione allo stato in cui si trova il paziente, causando ulteriore sofferenza.
S12	DS&WE	Lavorare con un infermiera/e o con personale di supporto (OSS) che considero professionalmente incompetente.
S13	DS&WE	Andare contro le proprie convinzioni morali a causa della mancanza di tempo adeguato per assistere il paziente.
S14	T&CP	Somministrare trattamenti nel contesto di una sperimentazione clinica o di un progetto di ricerca senza che l'infermiere abbia una conoscenza sufficiente di tutte le informazioni che ritiene necessarie per svolgere questo compito.
S15	DS&WE	Avere difficoltà nel fornire informazioni tempestive al paziente e/o alla famiglia perché l'equipe medica ostacola l'infermiere nel normalmente svolgimento questa attività.
S16	P&F	Assistere un paziente senza sapere se ha rilasciato un documento di direttive anticipate di trattamento e senza conoscere il contenuto di questo documento.
S17	T&CP	Gestire trattamenti e/o realizzare interventi al paziente senza aver potuto partecipare, in qualità di infermiere, alle decisioni relative alla loro attuazione.
S18	P&F	Trascurare la privacy del paziente durante l'esecuzione di procedure e/o test esplorativi.
S19	DS&WE	Mancanza di mezzi (ad esempio uno spazio) e/o risorse (ad esempio tempo) per far emergere dal team i problemi etici che si verificano in servizio.

Abbreviations: T&CP: Treatments and clinical procedures; P&F: Professional and Family interpersonal relationships; DS&WE: dynamics of the service and the work environment.

career of more than twenty years, and 29.5% (n=84) had between one and five years of experience in ICUs. Table 2 shows the details of the sociodemographic data.

Reliability

Reliability and validity were analysed with a sample of 206 responses, since these participants were those who had encountered, more or less frequently, the 19 potentially conflictive situations considered in the questionnaire. The overall Cronbach's α value was 0.866. When an item was eliminated, this value oscillated between 0.871 and 0.881 (Table 3).

This suggests that it was not necessary to eliminate any of the items, since the scores were high and did not imply substantial variations in the overall α value, which was considered very satisfactory as it was higher than 0.70. The covariance matrix, represented

Table 2. Sociodemographic data of the sample (n=286)

Variable / categories	Mean ± SD (range)
Age (years) (n=262)	37.82 ± 8.57
	n (%)
Sex	
Female	179 (63.5%)
Male	103 (36.5%)
Years worked as a nurse	
6 months and a year	5 (1.8)
Two to five years	40 (14.1)
Six to ten years	56 (19.7)
Eleven to fifteen years	58 (20.4)
Sixteen to twenty years	53 (18.7)
More than twenty years	72 (25.4)
Years worked in ICU	
6 months and a year	25 (8.8)
Two to five years	84 (29.5)
Six to ten years	57 (20)
Eleven to fifteen years	59 (20.7)
Sixteen to twenty years	35 (12.3)
More than twenty years	25 (8.8)
Work shift	
Monday to Friday mornings	13 (4.6)
Monday to Friday mornings and afternoons	177 (62.1)
Mornings or afternoons 7 days	17 (6)
Mornings, afternoons or night 7 days	77 (27)
Others	1 (0.4)

SD=standard deviation

Table 3. Cronbach's Alpha values and variance thus eliminating each item of the ECNQ-CCV Italian version (n=206)

Item	Item-test Correlation	Item-rest Correlation	Average interitem covariance	Cronbach's Alpha
1	0.7163	0.6392	13.50612	0.8488
2	0.5992	0.5207	14.2778	0.8563
3	0.6867	0.5969	13.48318	0.8506
4	0.6903	0.6162	13.5711	0.8505
5	0.5886	0.5102	14.15394	0.8561
6	-0.0218	-0.1196	16.47204	0.8794
7	0.4397	0.3420	14.86056	0.8649
8	0.7500	0.6828	13.36414	0.8476
9	0.7052	0.6152	13.26129	0.8503
10	0.6010	0.5225	14.09632	0.8569
11	0.5429	0.4611	14.37267	0.8591
12	0.5541	0.4411	14.05416	0.8588
13	0.7214	0.6485	13.5798	0.8511
14	0.1120	0.0245	15.43273	0.8684
15	0.2915	0.1919	15.24391	0.8688
16	0.2047	0.0903	15.5668	0.8718
17	0.5916	0.4989	13.99911	0.8568
18	0.4975	0.4094	14.60307	0.8607
19	0.5562	0.4634	14.26011	0.8591
Total scale			14.32887	**0.8656**

by a *heatmap* (Figure 1), shows the correlations calculated using pairwise elimination. It can be seen that the correlations are moderate although they are negative for situations S.6, S.14 and S.16 , which indicates an inverse association.

Construct validity

The CFA showed that the majority of items had a correlation greater than 0.40 in the first factor, and were capable of explaining 32% of the variance.

The CFA also revealed that the model is different from the saturated one, and it can be seen that certain items have negative factor loads, such as S.6 "Administer treatments and/or carry out interventions without the family knowing the objectives, benefits or risks

(when the patient gives their informed consent)" and S.15 "Having difficulties when giving timely information to the patient and/or family because the medical team hinders the nursing professional who normally performs this activity". In terms of significance level of the factor loading estimates, S.6, S.14, S15 and S16 are not statistically significant; however, the other 25 items are all statistically significant. Ten of the 19 items have factorial loads greater than 0.50, and are capable of explaining between 30 and 50% of the variability. Their condition was good or very good in the factorial analysis (Table 4).

Discussion

The ECNQ-CCV Italian version has proven to be a valid and reliable instrument for measuring exposure to ethical conflict in Critical Care nursing
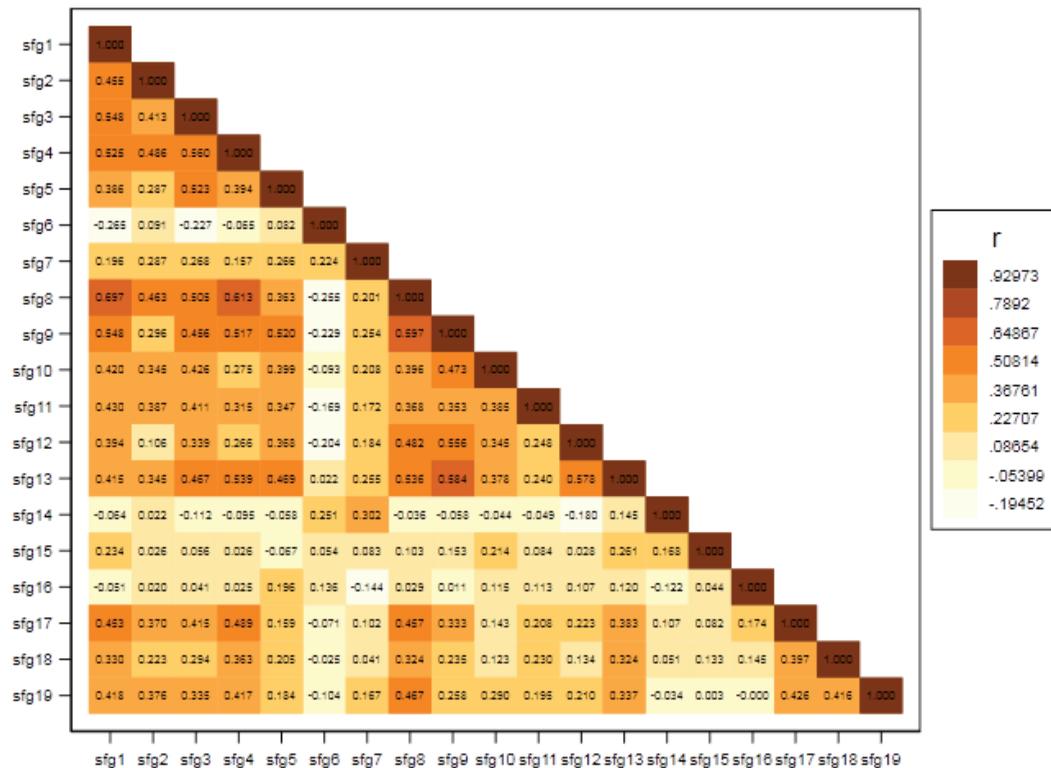
Figure 1. Heatmap matrix correlation between the items of the ECNQ-CCV Italian version.

professionals in the Italian healthcare context. With a Cronbach's α value of 0.866, it is close to the original Spanish version (0.882)(17), and the Portuguese version (0.886) (18), although lower than the Persian version (0.92)(19). It is superior to other questionnaires that explore ethical aspects, such as the Moral Distress Questionnaire (MDQ) by Corley(11), which has an alpha value of 0.78, or the Stress of Conscient Questionnaire by Glasberg et al. (2006), which has an alpha value of 0.83.

Unlike these instruments, it is necessary to note that the Falcó-Pegueroles model of ethical conflict(17) seeks to study the phenomenon of ethical conflict in a broader way, beyond the analysis of frequency and intensity. The different types of conflict and moral states that are considered make it possible to explore more problems than just moral distress, a term first coined by Jameton (25) and which focuses on the ethical problems generated by not being able to carry out, due to external elements or third parties, the decision considered morally correct. Moral distress, operationalized

by Corley (26) with the Moral Distress Questionnaire, involves not only a clash of values, but also the perception of the inability to act in accordance with these values and the restriction of personal action. However, this problem is intertwined with other types of ethical conflicts in clinical practice, such as, moral uncertainty, not knowing which decision is morally correct; moral dilemma, in which one of two *a priori* morally correct options must be chosen; or moral outrage, a feeling generated from observing others carry out an action considered immoral.(25,27)

Along the same lines as the original version(17) and instruments such as the Stress of Conscience Questionnaire,(16) the Italian version presents a single factor capable of explaining more than 30% of the variance, an item that can be attributed to the factor of ethical conflict that the questionnaire intends to measure. Other instruments, however, present more than one dimension but with a lower percentage of variance, such as the Ethical Issues Scale,(28) the Suffering related to care Questionnaire,(29) and the adapted

Table 4. Estimated parameters derived from the Confirmatory Factor Analysis (n=206)

Item	Estimates[a]	Typical error	Z	p[b]
1	0.7308955	.0554825	13.17	<.0001
2	0.5434557	.0818535	6.64	<.0001
3	0.6652571	.0669224	9.94	<.0001
4	0.8040689	.0430536	18.68	<.0001
5	0.8290090	.0393466	21.07	<.0001
6	-0.0739737*	.1145028	-0.65*	0.518
7	0.2578071	.1075363	2.40	0.017
8	0.9261266	.0212093	43.67	<.0001
9	0.8161751	.0407546	20.03	<.0001
10	0.3924016	.0975972	4.02	<.0001
11	0.3973742	.0974520	4.08	<.0001
12	0.7215794	.0572657	12.60	<.0001
13	0.8457581	.0356622	23.72	<.0001
14	0.0117655	.1148052	0.10	0.918
15	-0.1329609*	.1131120	-1.18*	0.240
16	0.1759292	.1112616	1.58	0.114
17	0.6334358	.0706845	8.96	<.0001
18	0.4911141	.0882256	5.57	<.0001
19	0.4656634	.0908919	5.12	<.0001

a) The estimates are the factor loadings;
b) p = significance level (95% confidence)
c) * negative factorial charges
Root Mean Square Error of Approximation (RMSEA) = .0166, p< .05; CFI (Comparative Fit Index) = .632; Tucker Lewis Index (TLI) .586; Likelihood ratio (LR) x^2=486.30 p< .0001

Moral Distress Questionnaire.(12) Nevertheless, all of these analyse the concepts related to ethical conflict based on the frequency and/or intensity experienced by the subjects.

Finally, the validation of the ECNQ-CCV in the Italian population provides more evidence of the validity of the questionnaire and its good metric properties. This instrument is thus a good option for exploring the phenomenon and it results can be used for comparison with samples from other countries that may or may not have cultural similarities.

Conclusions

Like any study, this research has some limitations that must be taken into account when the results are evaluated. First, it has the limitations of a self-administered questionnaire, in which the subject is free to answer what seems optimal to them, and this information is not contrasted through external observation or the analysis of other data. Another limitation is that it has not been possible to validate the criteria as there are no instruments that consider different types of ethical conflicts similarly to the ECNQ-CCV.

However, the ECNQ-CCV Italian version has proven to be a valid and reliable instrument for measuring exposure to ethical conflict in ICU and Emergency service nursing professionals in the Italian healthcare context.

Having an instrument to explore the level of ethical conflict in health professionals is the first step in designing strategies that help make decisions in the clinical context. It is recommended to measure this level of exposure to conflict regularly and especially before and after the implementation of an intervention aimed at improving the ethical environment of the services or in situations prior to health crises or pandemics in order to determine the levels of conflict existing between the professionals. In the Italian context, a validated and reliable instrument is now available that allows such an analysis to be carried out.

The findings of this study provide evidence of the validation of instruments in the field of clinical bioethics, in particular in relation to ethical conflict in healthcare professionals. This research can help other researchers carry out studies inspired by this work, so that this instrument for validating initiatives and strategies for improving decision-making in relation to people's health can be adapted to different cultural, professional and healthcare contexts, to promote ethical work environments in addition to providing scientific evidence in this field. All of this also has an impact on the quality of care people with health disorders receive.

The authors of this proposal are part of the Ethical Conflict- Health Care- International Project, open to researchers interested in creating and validating instruments in the field of clinical bioethics.

Knowing the level of exposure to ethical conflict in different health contexts and being able to validate preventive or therapeutic strategies for a better management of ethical problems experienced by profes-

sionals has a direct impact on the training and education in the preventive or protective measures that have been shown to be effective. This makes it possible to provide information on an issue frequently explored from a more general and qualitative perspective, which, although it is of interest to the scientific community, makes it difficult to undertake specific measures for the professional community, the health system and the cultural context.

References

1. Falcó Pegueroles AM. Análisis de la conflictividad ética en los profesionales de enfermería de las unidades de cuidados intensivos. Universitat de Barcelona; 2012.
2. Azoulay E, Timsit J-F, Sprung CL, Soares M, Rusinová K, Lafabrie A, et al. Prevalence and factors of intensive care unit conflicts: the conflicus study. Am J Respir Crit Care Med. 2009 Nov;180(9):853–60.
3. Hamric AB, Blackhall LJ. Nurse-physician perspectives on the care of dying patients in intensive care units: collaboration, moral distress, and ethical climate. Crit Care Med. 2007 Feb;35(2):422–9.
4. Kim SH, Kjervik D. Deferred decision making: patients' reliance on family and physicians for CPR decisions in critical care. Nurs Ethics. 2005 Sep;12(5):493–506.
5. Falcó-Pegueroles A, Lluch-Canut T, Roldan-Merino J, Goberna-Tricas J, Guàrdia-Olmos J. Ethical conflict in critical care nursing: Correlation between exposure and types. Nurs Ethics. 2015 Aug;22(5):594–607.
6. Chen Y-Y, Chu T-S, Kao Y-H, Tsai P-R, Huang T-S, Ko W-J. To evaluate the effectiveness of health care ethics consultation based on the goals of health care ethics consultation: a prospective cohort study with randomization. BMC Med Ethics. 2014 Jan;15:1.
7. Lusignani M, Giannì ML, Re LG, Buffon ML. Moral distress among nurses in medical, surgical and intensive-care units. J Nurs Manag. 2017 Sep;25(6):477–85.
8. Papathanassoglou EDE, Karanikola MNK, Kalafati M, Gi-annakopoulou M, Lemonidou C, Albarran JW. Professional autonomy, collaboration with physicians, and moral distress among European intensive care nurses. Am J Crit care an Off Publ Am Assoc Crit Nurses. 2012 Mar;21(2):e41-52.
9. Pavlish CL, Hellyer JH, Brown-Saltzman K, Miers AG, Squire K. Screening situations for risk of ethical conflicts: a pilot study. Am J Crit care an Off Publ Am Assoc Crit Nurses. 2015 May;24(3):248–56.
10. Pishgooie A-H, Barkhordari-Sharifabad M, Atashzadeh-Shoorideh F, Falcó-Pegueroles A. Ethical conflict among nurses working in the intensive care units. Nurs Ethics. 2019;26(7–8):2225–38.
11. Corley MC, Minick P, Elswick RK, Jacobs M. Nurse moral distress and ethical work environment. Nurs Ethics. 2005 Jul;12(4):381–90.
12. Eizenberg MM, Desivilya HS, Hirschfeld MJ. Moral distress questionnaire for clinical nurses: instrument development. J Adv Nurs. 2009 Apr;65(4):885–92.
13. Cavaliere TA, Daly B, Dowling D, Montgomery K. Moral distress in neonatal intensive care unit RNs. Adv neonatal care Off J Natl Assoc Neonatal Nurses. 2010 Jun;10(3):145–56.
14. Sporrong SK, Höglund AT, Arnetz B. Measuring moral distress in pharmacy and clinical practice. Nurs Ethics. 2006 Jul;13(4):416–27.
15. Dahlqvist V, Eriksson S, Glasberg A-L, Lindahl E, Lützén K, Strandberg G, et al. Development of the perceptions of conscience questionnaire. Nurs Ethics. 2007 Mar;14(2):181–93.
16. Glasberg A-L, Eriksson S, Dahlqvist V, Lindahl E, Strandberg G, Söderberg A, et al. Development and initial validation of the Stress of Conscience Questionnaire. Nurs Ethics. 2006 Nov;13(6):633–48.
17. Falcó-Pegueroles A, Lluch-Canut T, Guàrdia-Olmos J. Development process and initial validation of the Ethical Conflict in Nursing Questionnaire-Critical Care Version. BMC Med Ethics. 2013 Jun;14:22.
18. Lluch-Canut T, Sequeira C, Falcó-Pegueroles A, Pinho JA, Rodrigues-Ferreira A, Olmos JG, et al. Ethical conflicts and their characteristics among critical care nurses. Nurs Ethics. 2020 Mar;27(2):537–53.
19. Motaharifar F, Atashzadeh-Shoorideh F, Pishgooie AH, Falcó-Pegueroles A. Translation and psychometric properties of the "ethical conflict in nursing questionnaire: critical care version" in Iran. Electron physician. 2017 Feb;9(2):3776–85.
20. McAndrew NS, Schiffman R, Leske J. Relationships among Climate of Care, Nursing Family Care and Family Well-being in ICUs. Nurs Ethics. 2019;26(7–8):2494–510.
21. Polit DF, Tatano Beck C. Nursing research: Generating and assessing evidence for nursing practice. 11th ed. Wolters Kluwer, editor. 2020.
22. Nunnally JC. Psychometric theory. 3rd ed. McGraw-Hill, editor. New York; 1994.
23. American Educational Research Association, American Psychological Association & NC on M in E. Standards for educational and psychological testing. American Educational Research Association, editor. Washington DC: American

Educational Research Association American Psychological Association …; 2014.

24. Polit DF, Beck CT. The content validity index: are you sure you know what's being reported? Critique and recommendations. Res Nurs Health. 2006 Oct;29(5):489–97.

25. Jameton A. Nursing practice: The ethical issues. Englewood Cliffs, editor. New Jersey: Prentice-Hall; 1984.

26. Corley MC. Moral distress of critical care nurses. Am J Crit care an Off Publ Am Assoc Crit Nurses. 1995 Jul;4(4):280–5.

27. Wilkinson JM. Moral distress in nursing practice: experience and effect. Nurs Forum. 23(1):16–29.

28. Fry ST, Duffy ME. The development and psychometric evaluation of the Ethical Issues Scale. J Nurs Scholarsh an Off Publ Sigma Theta Tau Int Honor Soc Nurs. 2001;33(3):273–7.

29. Nordman T, Santavirta N, Eriksson K. Developing an instrument to evaluate suffering related to care. Scand J Caring Sci. 2008 Dec;22(4):608–15.

Correspondence:
Received: 30 May 2021
Accepted: 30 November 2021
Loris Bonetti, PhD, RN, MsN.
Nursing Research Competence Centre
Department of Nursing
Ente Ospedaliero Cantonale (EOC)
Viale Officina, 3
6500, Bellinzona, Switzerland
+41(0)918111347
and
University of Applied Sciences and Arts of Southern Switzerland,
Department of Business Economics, Health and Social Care
Via Violino, 11
6829, Manno, Switzerland
Loris.Bonetti@eoc.ch; Loris.bonetti@supsi.ch