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Healthcare workers perceptions in the difficult moment of the end of life and coping strategies adopted during the Covid-19 pandemic: an italian pilot study

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Abstract. *Background and Aim of the work.* In a society that tries so hard to forget and make people forget that death exists, death has never been so close to man in his daily life as during this pandemic. Health care professionals have therefore all too often had to deal with the death of the people they care for and with related issues such as, for example, the dignity of death, the humanization of death and care for the dying. The aim of the study is to highlight the perceptions of physicians, nurses and health and social workers in the difficult moment of the end of life, also analyzing which coping strategies were implemented by them. *Methods.* An on line questionnaire was administered to Italian physicians, nurses and social health workers, by investigating in depth the meaning that the participants attributed to the death event thanks to the COPE-NVI-25 questionnaire associated to some socio-demographic characteristics, as: sex, age, years of work experience, professional role, religious believes, Covid-19 ward assignment, the perception of their training relating to the death event and any difficulties related to the death event, respectively. *Results.* A total of 512 healthcare workers were enrolled in this study. By considering values of each sub dimensions of the COPE-NVI-25 scale according to each socio-demographic characteristic, significant differences were reported in the problem orientation sub dimension and age (p=.010), as participants aged from 31 to 40 years reported higher levels in this ability during the death event than the other participants, according to age sub groups. Additionally, health care workers with 11-20 years of work experience reported higher levels of transcendent orientation that the others (p=.047). moreover, catholic believers reported significantly higher levels in transcendent orientation sub dimension (p=.032), also in positive attitude (p=.030) and in social support (p=.035), than other religions by referring the caring during the death event. *Conclusions.* The end of life is a crucial passage and at the same time a challenge for health care systems, a stimulus to confront the profound reasons of medicine and its limits, guaranteeing the patient's sense of dignity. They need to be provided with emotional- operational tools to cope with the anxiety aroused by the death of a person who, although not part of their own intimate-personal world, is nevertheless not extraneous.

Key words: death; coping; covid-19; healthcare workers

Introduction

Coronavirus disease 2019 (COVID-19) was identified in December 2019 in Wuhan, China, and has spread rapidly, generating today more than 190,770,507 confirmed cases worldwide since the beginning of the pandemic and 4,095,924 deaths (1). Italy has been one of the most affected countries, with the main outbreaks located in northern regions, generating dramatic epidemic scenarios (2). The global spread of COVID-19 has severely tested the response capacity of health systems causing an increase in health work disproportionate to the resources available (3,4). Health workers have been working at pressures beyond their means, often without adequate personal protective equipment to protect themselves and others in a situation of constant change and uncertainty (3, 5,6). Physicians, nurses and social health workers have always been among the professional categories most subjected to stressful situations because of the peculiarity of their work, in close and continuous contact with the suffering of patients (3, 4). The current pandemic, due to the high contagiousness of the virus, has forced physical distance, limited presence at the patient's bedside, and strained the willingness of health care providers to care and be present. Offering and implementing palliative care to alleviate suffering even in Covid-19 patients, despite the complexity of the pandemic emergency in progress, is a good clinical practice (7,8), as well as an ethical duty, deontological (9,10) and juridical (11), especially in the end phase of life. The world of palliative care is faced with a necessary change in the relationship of care with patients, relatives and also with healthcare workers. Palliative care models have been able to remodel themselves and give a timely response, activating innovative and courageous responses, such as in-hospital hospices set up in full emergency even within intensive care units, or the inclusion of hospital palliativists within the teams of Covid-19 departments (12). Covid-19 has dramatically demonstrated the urgency of this attitude in the face of the challenges for future palliative care. (13) In a very short time, the possibilities of communication in the hospital context have generated repercussions not negligible within the care relationship. The pandemic led to limited contact times dedicated to communication, a contraction and human resources available which affected the possibility of communication. But what most impacted the quality and the modality of communication within the health context was the containment of the contagion, which imposed stringent conditions isolation measures for hospitalized patients with potential or proven SARS-CoV-2 infection. The ability to communicate and be understood for conscious patients is a necessary prerequisite for an effective care relationship. Some methods of communication, which make it possible to strengthen ties, to live a sensory and profound experience and understand the character of the person with whom one relates (14), were further strengthened during the Covid-19 pandemic period (15). The healthcare environment tried to implement approaches which meet, touch, tell each other, feel each other, where the voice, through tone, rhythm, frequency, pauses. In this way it allowed to pronounce words and also to transmit emotions (16), posture, facial expressions, gestures and eye contact (17), by undermining some barriers among all the individual protections worn by medical-health personnel, essential to contain the infection and protect the personnel. The emergency resulting from Covid-19 has led people to confront other radical changes especially concerning everyday life. In fact, it has eliminated a fundamental aspect of human existence and it is the rituality linked to death, necessary to live a normal mourning. There was something further than the loneliness of those who, also for fear of infecting their loved ones, went to death lying alone in a hospital bed: isolation (3, 4, 18-20), characterized by spy alarms and devices, the need emerged on the part of healthcare professionals to show their closeness to those who need support to combat the disease (21). The impossibility due to the strong restrictions on saying goodbye to relatives and friends has revolutionized millenary traditions and upset times, methods and dynamics that seemed secularized. Death has profound repression in the modern culture. The knowledge that death awaits could be frightening, even though nothing is more natural than death. Perhaps it is from this fear that the "taboo" of death and all that accompanies it was born. Healthcare workers have dedicated themselves to the humanization of care by emphasizing palliative care and trying to control symptoms and alleviate suffer-

ing (22). In this way it was demonstrated a wide range of psychological needs and uncontrolled emotional reactions (3,23-26) that could compromise health care (3,5,6). The work of caring for health workers, which has become tiring over time, has required a great deal of cognitive, emotional, and in some cases physical and organizational energy. The Covid-19 pandemic and the consequent quarantine have had and are continuing to have a significant impact not only on physical health but also on mental health, generating a degree of malaise and psychological distress in the general population (4,27,28) and in professionals (22-26). Based on the experience gained worldwide in the past regarding the psychosocial impact of viral epidemics, the development and implementation of mental health assessment, support, treatment and services are crucial and urgent goals for health response to the Covid-19 pandemic. In particular, healthcare personnel who work in contact with infected patients are at high risk not only of contracting the infection, but also of incurring mental disorders. Healthcare workers have implemented forms of therapeutic withdrawal, without ever abandoning the patient, they have experienced the daily mourning linked to the loss of such a high number of patients, which unfortunately will forever mark their private and professional life. The staff who worked in the isolation areas appear to be mentally and physically exhausted, with a consequent increase in the risk of insomnia induced by high stress (29). Kang et al. (30) found that among medical and nursing staff, women exhibited higher levels of anxiety and fear than men. From the study conducted by Zhang et al. (29) severe anxiety emerged among women who, reporting symptoms of depression, anxiety and distress to a greater extent, were at higher risk for psychological disorders (31,32). Empirical evidence underscores the need to address the harmful effects of epidemics / pandemics on the mental health of healthcare professionals. In this scenario (33), characterized by emotional turmoil, where life and death alternated on a daily basis, healthcare workers were forced to implement existential coping strategies, an aspect that to date has been little discussed in the literature during the Covid-19 pandemic. The aim of the study is to highlight the perceptions of physicians, nurses and social health workers in the difficult moment of the end of life, also analyzing which coping strategies were implemented especially during the Covid-19 pandemic period.

Materials and Methods

Study design

An observational, cross-sectional, multicenter study was conducted from Mars to August 2021.

Participants

All Italian healthcare workers were enrolled in this study, specifically, physicians, nurses and social health workers. The questionnaire was administered online. Physicians and social health workers were contacted through social networks, specifically physicians were recruited through social network in emergency medicine and social health workers were enrolled though their Italian social group. While, nurses were recruited through the Orders of Nursing Professions distributed on the Italian national territory, after sending a short presentation of the study to each President (n=103) and then, only after their consent, it was sent a link to the study in order to spread the questionnaire to all their nursing subscribers.

Ethical considerations

The questionnaire was administered in only an on-line form. Participation was voluntary and no form of personal restitution of the results obtained was involved. All the information collected had no diagnostic purpose and the results were treated confidentially, guaranteeing complete anonymity, and as such the information acquired cannot in any case be traced back to the natural person who completed the questionnaire.

The questionnaire

The questionnaire consisted of a series of items that aimed to describe the sampling characteristics and to investigate in depth the meaning that the participants attributed to the death event, specifically:

- Sex, as female and male;
- Age, divided into five different groups, as: from 20 to 30 years, 31-40 years, 41-50 years, 51-60 years, 61-70 years;

- Years of work experience, as: less than 10 years, from 11 to 20 years, over than 21 years;
- Professions, including only physicians, nurses and social health workers;
- Religion, as: Buddhist, Catholic, Hindu, Islamic and other, by including all Religions which were not mentioned before;
- Covid-19 or no Covid-19 ward;
- Whether the participant during training and continuing education delved into end-of-life issues and felt prepared to respond to patients' requests for care at the end of their lives;
- Frequencies in several difficulties that the death event caused in their lives, considering four different levels of frequencies, as: always, often, rarely and never;
- The COPE-NVI-25 questionnaire assessing what coping strategies the interviewee used to cope with the emotional and physical burden since the beginning of the pandemic. The questionnaire was made up of 25 items associating to a Linkert scale from 1 to 6, as 1 indicating "I never do" and 6 indicating "I always do". All the items were grouped into 5 sub dimensions, specifically: Avoidance Strategies, Transcendent Orientation, Positive Attitude, Social Support, Problem Orientation. By adding the items of each sub dimension, a total value was obtained, as higher values indicating a greater predisposition towards one sub dimension rather than another. The questionnaire was validated by previous studies that highlighted good psychometric properties (16,17).

Data Analysis

Data were collected in an Excel sheet and statistical processing was performed thanks to the IBM SPSS program version 20. Socio-demographic information and all the information collected were presented as numbers and percentages for categorical variables and then, for continuous variables were presented as means (μ) ± standard deviations (s.d.), respectively. Additionally, COPE-NVI-25 sub dimensions' scores were registered as means (μ) ± standard deviations (s.d.) and the ANOVA test was performed for the COPE-NVI-25 scale in order to assess variance differences between the COPE-NVI-25 scores and the socio-demographic variables collected, as: sex, years, years of work experience, profession, religion and ward typology. All p-values <.05 were considered as statistically significant.

Results

A total of 512 participants were recruited in this study. Of these, 80.5% were females and 19.5% were males. Most of participants aged from 20 to 30 years (41%), the 21.7% aged from 41 to 50 years and the 21.1% aged from 31 to 40 years, respectively. 57.4% of participants worked less than 10 years and 67.4% of them were nurses and were catholic (77.1%) (Table 1). Additionally, the COPE-NVI-25 sub dimension in which participants recorded the highest levels was the positive attitude to the death event (18.70±5.38), comparing it with the others sub dimensions of the same instrument. 42.8% of participants suggested that during their training the issue of the end of life was not sufficiently developed, and 41.2% supported that they quietly felt prepared to respond to patients' requests for the assistance and support for the dying during the latest 12 months' period. Particularly, they often felt difficulties in carrying out the technical aspects of the treatment (61.5%), in making decisions on treatments that match the needs of the person being assessed (60%) in often avoiding discomfort to other assisted person (53.5%), in often obstructing the assistance of other assisted person (51.4%), in replacing family members (33.8%), in standing next to the care recipient (39.5%), in often controlling their emotions (43.6%). Meanwhile, 73.3% of participants reported also that they never had difficulties to maintain communication and collaboration within the team and rarely difficulties in maintain effective communication with the assisted persons (42.6%) (Table 1). However, 18 participants reported an anxiety disorder during the latest 12 months, 13 subjects always registered apathy, 14 participants always recorded headache, 29 interviewers suggested difficulty in feeling pleasure, 12 participants always reported difficulty in concentration and 59 often, 41 participants always suggested emotional detachment and 99 often; 11 participants always reported sleep disorders and 39 always a gastro-intestinal disorder, too. Additionally, 49 participants always indicated a depression disorder, 11 a physical exhaus-

Table 1. Socio-demographic characteristics (n=512)

Socio-demographic variable	Value/frequencies (%) or Value/means ± standard deviation			
Sex:				
Female	412 (80.5%)			
Male	100 (19.5%)			
Age:				
20-30 years	210 (41)			
31-40 years	108 (21.1)			
41-50 years	111 (21.7)			
51-60 years	71 (13.9)			
61-70 years	12 (2.3)			
Years of Work Experience:				
<10 years	294 (57.4%)			
11-20 years	110 (21.5%)			
>21 years	108 (21.1%)			
Profession:				
Physician	66 (12.9%)			
Nurse	345 (67.4%)			
Social Health Workers	101 (19.4%)			
Religion:				
Buddhist	8 (1.6%)			
Catholic	395 (77.1%)			
Hindu	8 (1.6%)			
Islamic	3 (0.6%)			
Other	98 (19.1%)			
Ward typology:				
Covid-19	422 (82.4%)			
No Covid-19	90 (17.6%)			
COPE-NVI-25				
Avoidance Strategies	15.45 ± 4.74			
Transcendent Orientation	15.97 ± 4.83			
Positive attitude	18.70 ± 5.38			
Social Support	16.00 ± 5.09			
Problem Orientation	13.83 ± 4.42			
The end of life training	**For nothing**	**A little**	**Quite**	**Very**
In the course of training and professional updating, to what extent did you deepen the issue of the end of life?	73 (14.3%)	219 (42.8%)	157 (30.7%)	63 (12.3%)
To what extent, in the past 12 months, have you felt prepared to respond to requests for assistance and support for the dying?	38 (7.4%)	143 (27.9%)	211 (41.2%)	120 (23.4%)
In what aspects have you found the most difficulty during your shift in the last 12 months?	**Always**	**Often**	**Rarely**	**Never**
Carry out the technical aspects of the treatment	55 (10.7%)	315 (61.5%)	108 (21.1%)	34 (6.6%)
Make decisions on treatments that match the needs of the person being assisted	53 (10.4%)	307 (60%)	124 (24.2%)	28 (5.5%)
Avoid discomfort to other assisted persons	35 (6.8%)	274 (53.5%)	147 (28.7%)	56 (10.9%)
Obstruct the assistance of other assisted persons	63 (12.3%)	263 (51.4%)	141 (27.5%)	45 (8.8%)
Not being able to comfort family members	26 (5.1%)	153 (29.9%)	184 (35.9%)	149 (29.1%)
Not being able to comfort the assisted persons	41 (8%)	145 (28.3%)	186 (36.3%)	140 (27.3%)
Replacing family members	48 (9.4%)	173 (33.8%)	173 (33.8%)	118 (23%)
Stand next to the care recipient	35 (6.8%)	202 (39.5%)	153 (29.9%)	122 (23.8%)

Table 1. Socio-demographic characteristics (n=512)				
Control your emotions	52 (10.2%)	223 (43.6%)	127 (24.8%)	110 (21.5%)
Maintain communication and collaboration within the team	103 (20.1%)	27 (5.3%)	7 (1.4%)	375 (73.3%)
Maintain effective communication with the assisted persons	196 (38.3%)	52 (10.2%)	218 (42.6%)	46 (9%)
Please choose which of the following physical / mental problems you have experienced during or shortly after the death of a person you have cared for in the last 12 months	**Always**	**Often**	**Rarely**	**Never**
Anxiety	18 (3.5%)	79 (15.4%)	190 (37.1%)	225 (43.9%)
Apathy	13 (2.5%)	65 (12.7%)	210 (41%)	224 (43.8%)
Headache	14 (2.7%)	78 (15.2%)	278 (54.3%)	142 (27.7%)
Difficulty feeling pleasure	29 (5.7%)	96 (18.8%)	292 (57%)	95 (18.6%)
Difficulty concentrating	12 (2.3%)	59 (11.5%)	285 (55.7%)	156 (30.5%)
Emotional detachment	41 (8%)	99 (19.3%)	234 (45.7%)	138 (27%)
Distraction	28 (5.5%)	61 (11.9%)	200 (39.1%)	223 (43.6%)
Sleep disorders	11 (2.1%)	44 (8.6%)	218 (42.6%)	239 (46.7%)
Gastro-intestinal disorders	39 (7.6%)	101 (19.7%)	221 (43.2%)	151 (29.5%)
Depression	49 (9.6%)	126 (24.6%)	241 (47.1%)	96 (18.8%)
Physical exhaustion	11 (2.1%)	56 (10.9%)	222 (43.4%)	223 (43.6%)
Inability to get away from work-related thoughts	33 (6.4%)	64 (12.5%)	252 (49.2%)	163 (31.8%)
Lack of appetite	9 (1.8%)	27 (5.3%)	142 (27.7%)	334 (65.2%)
Disbelief	38 (7.4%)	86 (16.8%)	234 (45.7%)	154 (30.1%)
Hypertension	29(5.7%)	69(13.5%)	219(42.8%)	195 (38.1%)
Irritability	17 (3.3%)	22 (4.3%)	152 (29.7%)	321 (62.7%)
Social isolation	81 (15.8%)	106 (20.7%)	235 (45.9%)	90 (17.6%)
Mysticism	53 (10.4%)	80 (15.6%)	237 (46.3%)	142 (27.7%)
Thought of death of loved ones	11 (2.1%)	44 (8.6%)	192 (37.5%)	265 (51.8%)
Thoughts about your own death	31 (6.1%)	88 (17.2%)	242 (47.3%)	151 (29.5%)
Loss of control	40 (7.8%)	94 (18.4%)	242 (47.3%)	136 (26.6%)
Cry	24 (4.7%)	65 (12.7%)	240 (46.9%)	183 (35.7%)
Anger	102 (19.9%)	126 (24.6%)	215 (42%)	69 (13.5%)
Sense of guilt	23 (4.5%)	68 (13.3%)	194 (37.9%)	227 (44.3%)
Sense of helplessness	41 (8%)	87 (17%)	199 (38.9%)	185 (36.1%)
Recurring unpleasant dreams	64 (12.5%)	141 (27.5%)	255 (49.8%)	52 (10.2%)
Muscle tension	35 (6.8%)	98 (19.1%)	228 (44.5%)	151 (29.5%)
Sadness	4 (0.8%)	16 (3.1%)	110 (21.5%)	382 (74.6%)
Unstable mood	41 (8%)	98 (19.1%)	223 (43.6%)	150 (29.3%)
Thoughts of suicide	34 (6.6%)	45 (8.8%)	162 (31.6%)	271 (52.9%)
Demoralization	0 (0%)	0 (0%)	453 (88.5%)	59 (11.5%)
No physical and psychological problems	0 (0%)	0 (0%)	102 (19.9%)	410 (80.1%)

tion, 33 participants always suggested an inability to get away from work-related thoughts, 9 interviewers loss their appetite and 30 were disbelieved, 29 recorded hypertensions and 17 were also irritated, 81 preferred to remain isolated from their social contexts, 11 participants always thought of death of their loved persons and 31 about their own death, 40 among participants always loss their control, 24 tended to always cry, 102

felt them anger and 23 always felt a sense of guilt in themselves, while 41 always felt a sense of helplessness and 64 recurred unpleasant dreams; 35 participants always reported muscle tension and 41 unstable mood, while 34 reported thoughts of suicide. The most interesting data was: nobody always reported no physical or psychological problems referring to their experiences after the death of a person.

Then, by considering values of each sub dimensions of the COPE-NVI-25 scale according to each socio-demographic characteristic, significant differences were reported in the problem orientation sub dimension and age (p=.010), as participants aged from 31 to 40 years reported higher levels in this ability during the death event than the other participants, according to age sub groups. Additionally, health care workers with 11-20 years of work experience reported higher levels of transcendent orientation that the others (p=.047). Moreover, catholic believers reported significantly higher levels in transcendent orientation sub dimension (p=.032), also in positive attitude (p=.030) and in social support (p=.035), than other religions by referring the caring during the death event, too (Table 2).

Table 2. ANOVA- COPE-NVI-25 according to socio-demographic characteristics.

COPE-NVI-25/ Socio-demographic characteristics	**COPE-NVI-25 sub dimensions** μ±s.d.				
	Avoidance Strategies	**Transcendent Orientation**	**Positive attitude**	**Social Support**	**Problem Orientation**
Sex					
Female	15.43 ± 4.78	15.98 ± 4.95	18.68 ± 5.45	15.97 ± 5.12	13.79 ± 4.45
Male	15.48 ± 4.62	15.93 ± 4.36	18.81 ± 5.19	16.14 ± 5.03	14.08 ± 4.32
p–value	.926	.925	.831	.762	.558
Age					
20-30 years	15.26 ± 4.29	16.01 ± 4.69	18.68 ± 4.99	15.46 ± 4.38	13.13 ± 3.71
31-40 years	15.87 ± 5.00	16.01 ± 4.60	19.08 ± 5.46	16.19 ± 5.39	14.53 ± 4.93
41-50 years	15.70 ± 5.23	16.28 ± 5.06	18.93 ± 5.78	16.83 ± 5.75	14.27 ± 4.54
51-60 years	15.31 ± 4.69	15.94 ± 4.87	18.35 ± 5.61	16.42 ± 5.31	14.22 ± 5.02
61-70 years	13.42 ± 5.25	12.17 ± 6.01	15.50 ± 6.07	13.67 ± 4.96	11.83 ± 4.17
p–value	.434	.094	.260	.074	.010*
Years of work experience					
<10 years	15.42 ± 4.73	16.11 ± 4.77	19.10 ± 5.43	16.04 ± 5.05	13.72 ± 4.48
11-20 years	15.63 ± 4.66	16.55 ± 4.62	18.28 ± 5.10	16.24 ± 5.22	14.0 2± 4.06
>21 years	15.33 ± 4.90	15.01 ± 5.14	18.06 ± 5.54	15.66 ± 5.15	14.00 ± 4.63
p–value	.891	.047*	.148	.691	.793
Profession Role					
Doctor	14.64 ± 4.85	14.91 ± 5.33	18.18 ± 5.98	15.48 ± 5.66	13.23 ± 4.71
Nurse	15.56 ± 4.68	16.19 ± 4.74	18.66 ± 5.20	16.05 ± 5.04	14.04 ± 4.41
Operator Social Health	15.56 ± 4.89	15.94 ± 4.81	19.20 ± 5.65	16.18 ± 4.93	13.59 ± 4.24
p–value	.333	.147	.476	.662	.319
Religion					
Buddhist	14.33 ± 1.53	12.00 ± 2.00	16.33 ± 1.53	14.67 ± 2.08	13.00 ± 2.00
Catholic	15.41 ± 4.70	16.07 ± 4.89	18.60 ± 5.32	15.12 ± 5.00	13.77 ± 4.28
Hindu	13.00 ± 5.10	12.25 ± 4.65	14.75 ± 5.06	14.67 ± 2.08	12.62 ± 4.27
Islamic	12.62 ± 4.53	12.87 ± 5.87	16.00 ± 6.68	12.50 ± 5.13	12.12 ± 4.22
Other	16.05 ± 4.89	16.05 ± 4.43	17.74 ± 5.47	13.17 ± 5.38	14.42 ± 5.00
p–value	.150	.032*	.030*	.035*	.451
Ward					
No Covid-19	15.41 ± 4.78	15.88 ± 4.84	18.64 ± 5.47	16.03 ± 5.16	13.90 ± 4.52
Covid-19	15.66 ± 4.52	16.38 ± 4.79	18.99 ± 4.97	15.89 ± 4.78	13.51 ± 3.91
p–value	.653	.377	.577	.817	.445

*p<.05: statistically significant

Discussion

The present study aimed to understand the relevance of end-of-life issues in the perception of physicians, nurses and socio-health workers and the related coping strategies during the pandemic period. That of the end of life is a poorly observed and studied in-depth theme in the social sciences, while in the scientific ones the interest is directed to the symptom and its overcoming, to the body understood as the envelope of the symptom (34). Nurses are known to work in environments that contribute to the occurrence of numerous sources of stress. They often use coping and rely on personalized support from colleagues to reduce psychological distress (35,36). The end of life asks us to take care of existential aspects, the relationship, the whole-body feeling pain and not only that of the disease. Regarding the conception of death, it is important to reflect on it, and to search for the meaning of suffering and death (37). In a study by Chan and Tin (38) were investigated the skills for coping with death (37), such as the challenges which practitioners have accepted to face and which they continue to carry out with dignity. The results of the study show how transcendental orientation is one of the most active components in the perception as well as in the coping practices among health care workers and how this component is strongly influenced by the type of religion (p=.032) and the number of years of work experience (p=.047). The Christian religion and the others, not specifically stated, register higher levels in the coping strategies than the other religions. The range of years of work experience between 11 and 20 years also revealed higher levels of coping in this component. Furthermore, considering all the other socio-demographic variables among the health care workers, it can be noted that the religion variable is the most influential and this is also confirmed in other aspects of coping explored, such as: the positive attitude (p=.030) and social support (p=.035). All these aspects highlighted in this study are concretely confirmed by the current literature. Indeed, the literature showed how these emotional factors experienced by health care professionals could influence the way they care for a patient in the terminal stages of life (39). The performance of end-of-life care depended on how health care professionals perceive death; in particular, it has been explored how awareness of a happy death was associated with better end-of-life care services (40). Adequate support from *Ars Moriendi* requires not only a technical-scientific preparation also integrated by a corresponding bioethical -relational preparation (41). Doctors and nurses often remove the thought of death because, at times, they do not have an adequate culture, sufficient technical and personal tools (42). Verbal and emotional embarrassment were created, manifesting itself in the widespread inability to name emotions and the need to take refuge in the "professional control" of the condition, which could lead to indifference (43). The concept of a good death referred to accepting death itself, maintaining positive relationships, feeling closeness through spiritual faith and support, having a sense of control over the body and mind, and not feeling physical or psychological pain or suffering (44). The attitude of healthcare professionals towards end-of-life care influences their ability to care for terminally ill patients and their families (45), with a more positive attitude (46). Indeed, nursing care of the dying is described as a particularly challenging activity that requires both nursing skills and an insight into one's personal beliefs about death and the dying. Indeed, it was found that health professionals who had a more positive attitude towards death were more likely to have a positive attitude towards providing care to dying patients. It is important and urgent to enrich health care with emotional intelligence, that is, the ability to recognize our feelings and those of others (47). Communicating with emotional intelligence implies the ability to follow the flow of emotions that lead to empathy from self-awareness. Effective communication becomes of fundamental importance to offer quality health care both emotionally and therapeutically (48). American psychologist Daniel Goleman argues that emotional intelligence can be a determining factor in achieving one's personal and professional successes (49). Silence, a form of non-verbal communication, even at the end of life, could be loaded with meaning (50). It could allow the expression of the patient's emotions, going to strengthen that relationship of trust with the professional, perhaps by asking an open question in an attempt to peer into the patient's thoughts (51) In the literature, these are aspects that deserve to be in-depth, in order to ensure above all better care. Furthermore, the literature points out that healthcare professionals need to consider their own spiritual beliefs (as well as those

of the dying patient) because they may affect their objectivity in caring for a dying patient. The data presented in this study also show the transcendental component as the one most influenced by socio-demographic variables. In addition, the literature shows that healthcare professionals under 30 years of age are less able to deal with negative attitudes and emotional labour demands in the dying. On the other hand, our data show higher coping values in the transcendental sphere in the highest age group, with between 11 and 20 years of work experience. In addition to the meaning of life, the concept of self-transcendence addresses a greater understanding of well-being in late adulthood (52,53) and among various vulnerable populations, such as nursing home residents, cancer and AIDS patients, and the homeless, emphasizing maturity as a developmental task across the lifespan (54), in which there is a greater awareness of the environment and an orientation toward broader life perspectives (52). Several studies in the literature have shown how the dimension of religious transcendence, especially when developed over the individual's lifetime as an autonomous technique, is significantly correlated with an individual's general well-being (55,56). In addition, interpersonal self-transcendence reduces stress, improves well-being, hope and meaning among different groups of patients facing the vulnerability of severe and progressive illnesses, as well as among healthcare professionals including multiple sclerosis and systemic lupus erythematosus (57-60). In this regard, self-transcendence has been used to design programs that are effective in promoting the psychological well-being of the older population in the community (61,62).

Strengths and limitations

The present study afforded an interesting argument since today few literatures have just discussed on this issue. However, it was necessary to consider several limits. Firstly, among all healthcare workers recruited, it was not considered if participants belonged to a red geographic Covid-19 zone or not. Secondly, it was not considering if participants had a specific training regarding palliative care or not. Then, future studies will consider all this aspect in order to better describe the effects of the death event in healthcare workers.

Conclusion

The results of the present study certainly represented an opportunity to create meaningful interventions based on spirituality for healthcare professionals. The end of life is a crucial passage and at the same time a challenge for health care systems, a stimulus to confront the profound reasons of medicine and its limits, guaranteeing the patient's sense of dignity. They need to be provided with emotional- operational tools to cope with the anxiety aroused by the death of a person who, although not part of their own intimate-personal world, is nevertheless not extraneous. This must be discovered and in some way socially defined and legitimized.

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