


The living experience of surviving out-of-hospital cardiac arrest and spiritual meaning making

Maria Aristidou¹ | Maria Karanikola² | Elizabeth Kusi-Appiah³ | Anna Koutroubas² | Usha Pant³  | Foteini Vouzavali⁴ | Ekaterini Lambrinou² | Elizabeth Papathanassoglou^{3,5}

¹Department of Nursing, European University Cyprus, Nicosia, Cyprus

²Department of Nursing, Cyprus University of Technology, Limassol, Cyprus

³Faculty of Nursing, University of Alberta, Edmonton Clinic Health Academy (ECHA), Edmonton, Alberta, Canada

⁴Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

⁵Neurosciences Rehabilitation & Vision Strategic Clinical Network™, Edmonton, Alberta, Canada

Correspondence

Elizabeth Papathanassoglou, Faculty of Nursing, University of Alberta, Edmonton Clinic Health Academy (ECHA), Edmonton, Alberta, Canada.

Email: papathan@ualberta.ca

Abstract

Aim: To understand the meaning of surviving out of hospital cardiac arrest and its aftereffects among Greek-speaking survivors.

Design: Hermeneutical phenomenological method based on Martin Heidegger's philosophy.

Methods: Eight Greek-speaking out of hospital cardiac arrest survivors were recruited using purposive sampling method. Data collection and analysis using the seven stages of hermeneutic analysis described by Diekelman. Data were collected through semi-structured personal interviews with open-ended questions.

Results: Analysis revealed five themes: 'The unexpected attack', 'Experiencing a different world: Transformation of Body, Time, Emotion and Sensation', 'Restoration of the re-embodied self', 'Life transformation' and 'Personal transformation'. The themes are commensurate with transcultural components of Near-Death Experiences. Surviving out of hospital cardiac arrest was perceived as a 'divine gift' and a chance to continue 'living in a more conscious and meaningful way'. Despite participants' physical and psychosocial challenges, the narratives highlighted a newly acquired deep appreciation for the joy of life, living and others. Construction of meaning and a heightened spirituality seem central in reconstructing life after out of hospital cardiac arrest survivors.

Patient or Public Contribution: Out of hospital cardiac arrest survivors reflected and described in-depth on their lived experiences of out of hospital cardiac arrest through a 60- to 90-min interview. In addition, the participants provided their feedback on the interpretation of the findings, confirmed the study findings, and ensured that the analysis reflected aspects of their individual experiences and were true to them.

KEYWORDS

cardiac arrest survivors, hermeneutical phenomenology, near death experience, out-of-hospital, qualitative research, spirituality

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1 | INTRODUCTION

A significant number of out-of-hospital cardiac arrest survivors (OHCA) experience subsequent cognitive, physical and emotional impairments impacting their quality of life and personal and social functionality (Sawyer et al., 2020; Wagner et al., 2021; Yaow et al., 2022). An estimated 45% of survivors experience depressive symptoms, up to 61% anxiety, while about 27% experience post-traumatic stress disorder (PTSD) symptoms (Wilder Schaaf et al., 2013). OHCA may also be associated with Near Death Experiences (NDE) (Martial et al., 2020; Ring, 1980; Woollacott & Peyton, 2021), a controversial phenomenon increasingly validated by survivors (Moore & Greyson, 2017). NDE typically lead to transformations in survivors' attitudes, values and spiritual beliefs (Jahromi, 2021; Klemenc-Ketis, 2013). Positive effects have been reported, including positive changes in survivors' sense of purpose, and meaning in life (Jahromi, 2021) but it remains unclear if NDEs are associated with improved psychological adaptation. Understanding the complexity of OHCA with or without NDE is vitally important in supporting survivors in a holistic manner. Qualitative studies investigating the experiences of OHCA survivors illuminated several common themes across cultures (Aristidou et al., 2018), along with variabilities likely due to culture-specific interpretations and language filters (Greyson, 2015; Martial et al., 2019). Quantitative data also support that religious beliefs are associated with the experiences of survivors of major cardiac events (Ai & Hall, 2011), and that religiosity may increase after cardiac arrest (van Lommel et al., 2017); while higher levels of spirituality and/ or religiosity are associated with better quality of life after cardiovascular events (Abu et al., 2018). Greek Cypriots are predominantly Christian Orthodox, and one of the most devout nations in Europe (Chrysoloras, 2010). Previous research with severely ill Greek Christian Orthodox patients has shown the importance of denomination-specific religious beliefs and rituals among patients and their families, and the need for nurses to better support patients' spiritual healing practices (Fouka et al., 2012). Based on evidence that culture and religiosity affect the experience of illness (Büssing et al., 2005), a qualitative exploration of the experiences of Greek Cypriots coping with severe illness can help understand their perspectives and needs. Therefore, understanding how Greek-Cypriot OHCA survivors interpret and make meaning of their experiences can help inform health care. Even though OHCA survivors' physiological and psychological outcomes have been widely addressed, less is known on the holistic needs of survivors of OHCA. Knowing what really matters to the survivors can enhance the ability of healthcare professionals to prioritise care and thus have a potential to inform holistic care. The purpose of this study was to understand the meaning of surviving out of hospital cardiac arrest and its aftereffects among Greek speaking survivors understanding the meaning of surviving a cardiac arrest.

2 | METHODS

2.1 | Design

A hermeneutical phenomenological method based on Martin Heidegger's philosophy informed the data collection and analysis. Hermeneutics, more than a mere description of experience, focus on an existential understanding of how people interpret their experience, their body, actions and relationships embedded in their world and culture. The aim of interpretation is the self-interpreting human who is engaged in a world of meaning, a notion termed as 'Dasein' (*Being*) by Heidegger (1962). Beings are embedded in a web of meanings, and they comprehend themselves, their experience and others, through language and symbols. Hence, hermeneutic analysis considers the symbolic and cultural meanings embedded in participants' narratives (Heidegger, 1962; McCaffrey et al., 2012). Hermeneutics was deemed as an appropriate approach for exploring how OHCA survivors make sense of their experience and how this affects their meanings in life and existence. The consolidated criteria for reporting qualitative research (COREQ) were followed (King, 2021).

2.2 | Sampling and recruitment

Participant selection was based on purposive sampling directed towards adult women and men who had survived OHCA in Cyprus. The sample size was based on achievement of a comprehensive description and interpretation of participants' experiences, and thematic saturation, a phenomenon resulting when no new themes are obtained (Hennink et al., 2020). Namey et al. (2016) acknowledged that data saturation occurs between eight and 16 interviews. Decisions regarding thematic saturation was made by the principal investigator and the interpretive team.

Participants were recruited from the Head of the Registry of Cardiac Arrest of a metropolitan General Hospital in Cyprus, who contacted potential participants via telephone to introduce the study aims and procedures and assessed whether they met the inclusion criteria. The inclusion criteria was comprised of: (1) Adults, aged 18 and over, (2) Language: Greek only, (3) Oral and written consent to share willingly their feelings and perceptions with the research team and discuss in depth their experiences, (4) Absence of a major mental disorder, that is, psychosis, dementia or any other severe neurobiological impairment that would hinder reflective thinking, (5) Ability to describe in depth and reflect on the lived experience of OHCA. Contact information was provided to the principal investigator by the Head of the Registry.

2.3 | Data collection

Data were collected through semi-structured personal interviews with open-ended questions by the principal investigator from

September 2015 to April 2017. The principal investigator interviewed eight participants three times, with the last interview being used for confirmation of the analysis. The interviews took place at locations of participants' choosing, which included their homes, offices or coffee shops. All interviews were recorded and transcribed verbatim. The following questions, based on relevant literature (Aristidou et al., 2018) and a panel of experts' input (three academics with experience in qualitative research), guided the interviews: 'Can you describe what you remember from your cardiac arrest experience? What are your emotions/thoughts about this experience?'; 'What does this experience mean for you?'; 'Has this experience affected you in any way?'. The investigator used reflective listening techniques and prompts to help participants tell their story, and to remain focused on the questions. However, the main interview questions remained unchanged. Each interview lasted 60–90 min. A second interview was held to get the participant's feedback regarding the interpretation of the findings of their first interview. Data collection and analysis was conducted simultaneously. Fieldnotes of participants' non-verbal expressions were taken to gain a contextualised picture of the phenomenon. At a third personal interview each participant's feedback regarding the core and the main themes of the analysis was obtained. The primary investigator has extensive experience with similar groups of patients and patients with post-traumatic symptoms, and was able to debrief participants, ease tensions through empathetic listening and help the participants diffuse negative emotions. Moreover, the investigator was prepared to provide information about access to mental health supports, in case it was deemed beneficial to the participant.

2.4 | Data analysis

The hermeneutical cycle of interpretation evolved concurrently with the interviews with active participant input (Benner, 1985). Data analysis was informed by the seven stages of hermeneutic analysis

as described by Diekmann et al. (1989). Table 1 presents the steps of the analysis. The interpretive group consisted of four researchers: the principal investigator (a female doctorate candidate) and three female nursing academics. Each researcher analysed each interview independently and then the interpretive group met, as necessary, to discuss and finalise the findings. Through this process, groups of main themes and subthemes were developed reflecting common interpretations. Consensus among researchers directed the results. Several individual categories were integrated into larger themes that were deemed meaningful by both researchers and participants. For example, the categories of 'altered consciousness', 'changes in embodiment', 'sensory alterations', 'transformed perception', 'transformed emotion', 'unreal experience', 'unreal world', 'experiencing other dimensions', 'altered sense of time', 'altered space', 'newly experienced emotions' gave rise to the main theme: 'Experiencing a different world' and the subthemes 'Transformation of Body, Time and Space' and 'Transformation of Emotion and Sensation'.

2.5 | Ethics or ethical considerations

This study was approved by the National Bioethics Committee and the Office of Personal Data Protection Commissioner of Cyprus. Participants were assured of voluntary participation, confidentiality and their right to withdraw at any time. Oral and written consent were obtained. Anonymised transcripts of the interviews were coded and saved with password protection on a computer accessible only to the principal investigator. Participants' names were replaced by pseudonyms.

2.6 | Rigour

Together the use of purposive sampling, and open-ended interview questions, facilitated deepness and richness of the data. In addition,

TABLE 1 Steps of data analysis applied in the study.

Stages	Actions
1	Reading each interview to obtain an overall understanding of the participant's experience.
2	Identifying meaningful text parts and writing interpretive summaries and relevant codes for each text part in the interview.
3	Comparing and contrasting texts to identify and further describe shared meanings and common themes/subthemes within the interview (preliminary main themes & subthemes); clarification of disagreements with the interpretations among researchers and resolution upon agreement.
4	Identifying patterns that possibly link the preliminary themes/subthemes identified in the interview.
5	Comparing the preliminary themes and subthemes of each interview with one another to identify the common themes and subthemes among the sample interviews.
6	Synthesizing the common main themes and sub-themes across the sample interviews and verifying the final main themes and subthemes
7	Identifying any patterns that may link the common main themes and subthemes across the sample interviews, revealing the core theme.
8	Writing a composite analysis, including responses and suggestions on a final draft from the interpretive team and others who were familiar with the content or the methods of study.
9	Returning to the participants to verify interpretation and/or clarify disagreements with the interpretation of the main themes and core theme.

the principal investigator conducted all interviews to avoid bias linked with the involvement of different researchers (Polit & Beck, 2012). Data collection was conducted until data saturation was achieved, which was at the eighth participant interview. Prolonged engagement was ensured by collecting data over a period of 2 years that allowed repeated meetings with the participants, while it fostered an empathic and trusting relationship (Karanikola, 2019) and hence obtain more open and honest responses from participants. Moreover, to ensure rigour the interviewer practiced reflexivity after each interview as a tool to become aware of the preconceptions and biases.

Data analysis through an interpretive team enabled continuous evaluation of the rigorosity of interpretations (Ingham-Broomfield, 2014). During the data analysis, the authors tried to view the text as objectively as possible and interpreted the text with critical reflection. We integrated all the participants' voice using quotations representing all participants. Triangulation was achieved using field notes written by the interviewer during the interview process and interview transcripts to minimise bias and optimise accuracy. In addition, reflexivity and rigorous peer review was integral during the data analysis to ensure quality of the findings. Moreover, member checking was done employing a second participant interview that provided a chance to partially confirm the data analysis and ensure the rigour of the interpretation (Karanikola, 2019). Additionally, a third interview was conducted to confirm the study findings by participants to ensure that the analysis resonated with each participant; it constituted a thorough interpretation of their experiences; findings were interpreted reasonably well; they reflected aspects of the participants' individual experiences; they expanded on the participants' perception of reality; they were readable, relevant and were true to participants (Munhall, 2012). Moreover, confirmability was supported by comparing our findings with other similar studies and by having the results audited by all the coauthors.

To achieve transferability and dependability, we provide sufficient descriptive data on the study population, the methods of data collection, interview questions, analysis and interpretation during presentation of the findings, illustrated with several direct quotes (Lai et al., 2007).

3 | RESULTS

Seven males and one female between the ages of 45 and 69 participated. One male was a divorcee, the remaining seven participants were married. One of the participants had primary school education, four had secondary school education and three held graduate diplomas. All were Christian Orthodox. The participants' OHCA experiences had occurred 2–10 years before the time of the interview. Surviving OHCA was perceived as a 'divine gift', which emerged as the core theme. Analysis also revealed five additional themes: 'The unexpected attack', 'Experiencing a different world: Transformation of Body, Time, Space, Emotion and Sensation', 'Restoration of the re-embodied self', 'Life transformation' and 'Personal transformation'. The main themes along with supporting quotes appear in Table 2.

Participants seemed to be attributing a transformative and spiritual meaning to their survival. The experience of the heart attack disrupted their lives and their sense of embodiment in the world, and ultimately resulted in bodily and personal transformation, hence, survival was conceptualised as a gift and a second chance to live a more authentic life.

3.1 | Core theme: Divine gift

All participants attributed strong spiritual meaning to their experience of surviving OHCA, which they described as 'a divine gift', 'gift from God', 'given by God'. The expression 'divine gift' was used to encapsulate the deeper meaning of the OHCA experience. It seemed to express participants' thankfulness for the second chance they were given to start 'living in a different, more conscious and meaningful way'. Specifically, P3 related: 'I see life [now, after the OHCA] as a divine gift because death is the most intimate experience of self-awareness [...] I realize things, I had never realized before... Every morning when I wake up, I tell myself "It's so nice"'. Participants described that they had come very close to death, since 'death [was] next to [me] (P5)'. They also expressed their thankfulness to God for giving them 'a second chance in life (P1)'. P8 expanded: 'God has given me a second chance; He could have taken me away at that moment, but He let me live'. By some even the experience of the cardiac arrest was conceptualised as a gift, because it created the opportunity for a new start in life: 'I mean, would I be able to do all these things I love, if not for this [the OHCA]?'.

The notion of 'Divine gift' was central in participants' conceptualisation of survival and closely linked to the themes of 'life transformation' and 'personal transformation' as described below. In what follows, rich descriptions of the themes and sub-themes grouped according to the objectives of the study are presented with direct quotes from the participants.

3.2 | The cardiac arrest experience

Participants described intense experiences upon realizing that they were at the edge of death. Recounts of their stories revealed the evolution of their experiences captured in three themes: 'The unexpected attack', 'Experiencing a different world: Transformation of Body, Time, Emotion and Sensation' and 'Restoration of the re-embodied self'.

3.2.1 | The unexpected attack

The participants' initial reaction to the physical sensation of a life-threatening condition was depicted through vivid, metaphoric descriptions, while psychological and spiritual encounters were also evident. In all cases, heavy breathing, excessive perspiration, chest tightness, dizziness and pressure were common and were perceived

TABLE 2 Main themes and selected participants' quotes (OHCA: out-of-hospital cardiac arrest).

Theme [description]	Selected participants' quotes
<p>Core Theme: Divine Gift</p> <p>[This theme encapsulates the deeper meaning of the OHCA experience. It expresses participants' thankfulness for the second chance they were given to start 'living in a different, more conscious and meaningful way']</p>	<p>'I feel empowered now, and I view life as a divine gift, and yes I appreciate what has been given to me' P3</p> <p>'It is a gift what happened, so I can find the meaning of me coming to this earth, any meaning...' P5</p> <p>'...life is a gift, and if you do not enjoy it, then the moment may come that you will leave and you will have many unresolved issues' P6</p> <p>'...the facts change. You perceive things that you might have never understood before.' P7</p> <p>'I have started living in a different, more conscious and meaningful way'. P2</p> <p>'I see life [now, after the OHCA] as a divine gift because death is the most intimate experience of self-awareness...' P3</p>
<p>The unexpected attack</p> <p>[The participants' initial reaction to the physical sensation of a life-threatening condition was depicted through vivid, metaphoric descriptions, while psychological and spiritual encounters were also evident.]</p>	<p>'...suddenly, I felt this pain in the chest [and] it wasn't something familiar' P4</p> <p>'this pain started weighing on my chest, as if an elephant had its foot on my chest...keeping me from breathing...' P7</p> <p>'I was fading away, I was done; there was no more life left in [me]'</p> <p>'I crossed myself... I said "God, I'm dying"'. P6</p> <p>'I felt so much pain, I could not breathe... I am telling them... I am dying. I am telling you, I am dying... I slipped down and it was finished...' P1</p> <p>'...I felt like a dizziness, very powerful... as if I was leaving, like a serenity, a calmness...' P5</p> <p>'My soul... I felt it was a shadow of myself, I felt it as it was me, not something else, like how you look at your self in the mirror... like a shadow of myself in the mirror' P8</p>
<p>Transformation of Body, Time and Space</p> <p>[Participants described encounters with death and dying, which involved elements resembling near death experiences. Participants perceived that time collapsed, space was altered and that their body was transformed, and/or became lighter and was in movement.]</p>	<p>'...at that moment, my entire life went through my brain like a movie'. P1</p> <p>'I had white wings and I was flying...' P5</p> <p>'...I had my arms open and I was flying...' P3</p> <p>'I was rising high, and I could see the earth becoming smaller...' P8</p> <p>'It was dark, pitch black, but at some point there was light, far ahead, and there at the entrance there were two large tree trunks, like electric poles, and this was like an entrance that they were going through...' P4</p> <p>'I entered a tunnel... it was very long, there was a deem light, all was light, only light, and as I was walking the light was accompanying me'. P7</p> <p>'A thing round, like a channel, and far away I saw a light'. P2</p> <p>'What I experienced... maybe it lasted fragments of a second, but it felt that it took long, I felt that I got exhausted...' P1</p> <p>'After I regained my senses, they told me I was dead for 3 minutes, but it was as if a year passed... a very long time... a very long time you experience there...' P6</p>
<p>Transformation of Emotion and Sensation</p> <p>[Most participants described intense feelings of joy, immense peace and euphoria.]</p>	<p>'I felt calm, happy...immensely serene' P4</p> <p>'My whole life passed from my mind at that time... That time was the most happy time of my life'. P5</p> <p>'I felt I was hearing a sound, like the sound of waves when there is complete quiet and calm... a calmness, a serenity...' P7</p> <p>'I felt so very good... and it was pleasant, it was amazing. I felt an elation ... there is nothing better than this emotion...It was bliss, it was happiness...' P6</p> <p>'I went to another world, I felt tranquillity, happiness... immense serenity and happiness...' P4</p> <p>'I felt the sweetness of the light, and I said: My God, is it possible for such I place that I found my self in to exist?' P7</p> <p>'...It caused me such cheerfulness, a joy that I reached this point in the light... a worry-free life that made me feel the most joyful person in the world...' P3</p>
<p>Restoration of the re-embodied self: The re-embodiment of the soul</p> <p>[The experience of life's restoration sheds light on how participants perceived death and their existence in the face of death.]</p>	<p>'the most terrible of all [were] those few fractions of a second when you found yourself in nothingness, in absolute nothingness...that was the most defining moment' P3</p> <p>'...it was as if I was fighting something huge... and I kept telling myself "try harder, if you do not make it, there's death"... I felt I was engaged in a ferocious battle...' P3</p> <p>'I remember (my soul) stepping into my body, feeling something akin to a shudder, and then I woke up...' P4</p> <p>'I am not afraid of death, previously, I was very afraid, now I am not afraid of anything...' P6</p>

(Continues)

TABLE 2 (Continued)

Theme [description]	Selected participants' quotes
<i>Life Transformation: the reality of survivorship</i> [Participants were thrown into a new reality, which encompassed new limitations and strains; to which they gradually adapted, therefore transforming their way of living and perceptions in life.]	'Many times, I tried to relive the life I used to live, but the past could not be unwritten' P1 'Whatever you do, you do it in fear. It's inside of you. I've got this problem that might affect me at any given moment'. P1 '...when you are having a good time, you may have a little bit more to drink. Previously, I would not mind, now I am careful'. P4 'After the first three months, I started seeing things differently. That I would not let this defeat me, I see things more positively'. P7 'I try, I try a lot, to not mind some things as previously. I cannot get stressed with every little thing... almost as if nothing really matters, to be frank...' P3 'I take my time, I take long walks, I watch my diet. If I want to see a friend, I go to meet them. I has become a new way of life for me'. P6
<i>Personal Transformation: new meaning</i> [After experiencing OHCA, the participants perceived that they started grasping the 'true' meaning of life and they felt that they were maturing as human beings.]	'I could finally see clearly, see what matters...as if a curtain was drawn back to finally [see] the world' P3 '...going after money [and] possessions... at the end of the day... could go in vain...' P2 'You stop caring about material goods, if I am going to get a new car, if I will get a new house, if I will do this, if I will go there...' P7 'I realized that we have to do the things that we like and we mustn't postpone them... because the time may come that you will leave...And it is a very bad thing to have remorse'. P8 'Where are you going, my man? This is not the value of life... to be at your place, at your home, with your kin, your friends, your family, your friends'. P1

as an external, unprecedented and unexpected assault: 'suddenly, I felt this pain in the chest [and] it wasn't something familiar' (P4). The metaphors used to describe chest pain reflected its enormously and startlingly overwhelming impact as follows: 'this pain started weighing on my chest, as if an elephant had its foot on my chest... keeping me from breathing...' (P7); The solidity of the human body was threatened, while helpless and powerless seemed to overwhelm their existence.

The participants' narratives included descriptions similar to NDE: 'I was fading away, I was done; there was no more life left in [me] (P6)' and sought refuge to their faith. One respondent recollected 'I crossed myself... I said "God, I'm dying"' (P8).

Crossing one's self is an especially prominent cultural religious symbol among Greek Orthodox Christians. Our participants often used the sign of the cross while relating their experience. Profound mystical and transcendental features of out of body NDE were reported, alluding to the duality of the soul and body. The soul was described as 'a shadow of one's self in the mirror (P8)', separated from its tangible, material cohabitant, the body. P8 recalled getting out of her body and seeing herself as 'white as snow'. Moreover, the description of the soul as a shadow in the mirror may entail cultural conceptualisations of the soul and death surviving in Greek folklore.

3.2.2 | Experiencing a different world: Transformation of body, time, emotion and sensation

Participants' accounts of the cardiac arrest experience were replete with imagery depicting alterations in all aspects of the embodied experience, involving the perception of body, time, space, emotion and sensation. Following this experience, participants engage in a 'battle' to restore their embodied self.

Transformation of body, time and space: Participants described their encounter with death and dying and shared elements of their

experiences resembling near death experiences. All participants shared the perception that time collapsed during their near-death experience: 'at that moment, my entire life went through my brain like a movie' (P1); their near-death experiences also included moving through a tunnel, flying towards the light, seeing other entities, and experiencing positive emotions. Most participants described a sense of being 'bodiless', to 'have left [their] body behind', or 'very light', and 'buoyant' (P4, P7, P8), and feeling a force pulling on their bodiless existence: P8 described: 'all of a sudden, an invisible force, an immense force started pulling me upwards'. Representatively, P7 experienced 'entering this tunnel', P8 encountered 'flying upwards to the sky', while P4 'saw a light and [moved] towards it'. However, the crossing to the light was not uneventful as it was interrupted by other, special entities entitled to 'check who would pass over' (P4). This world also housed other presences, regarded by some of the participants as souls, which appeared either familiar or unfamiliar to them: 'could see bright things; like a glittering shadow but couldn't make out any faces... perhaps they were souls' (P8). Likewise, P7 'felt people next to [him], like someone's shadow', but could not make them out. Instead, P5 said: 'I saw so many people dead. My father and mother were there'.

Transformation of Emotion and Sensation: Interestingly, most participants described intense feelings of joy, immense peace, and euphoria. These feelings emerged upon encountering another 'dimension', 'an unprecedented place' (P3), 'another world' (P7). P4 described: 'I felt calm, happy...immensely serene', while P7 articulated a transformation of the body accompanied by a physical and emotional sensation: 'I was no longer that body in pain, the perspiration, the agony'. They felt surrounded by a 'sweetness' (P7) which made them happy. The participants' sense of hearing became sharper in the realm of the hereafter: 'I could hear a sound like waves swishing from afar' (P7).

Restoration of the re-embodied self: The re-embodiment of the soul: The experience of life's restoration sheds light on how participants

perceived their existence in the face of death. Their narratives suggested that they were not afraid of death itself, but of the instantaneous feeling of absolute nothingness, which arose upon restoration of their embodied consciousness: 'the most terrible of all [were] those few fractions of a second when you found yourself in nothingness, in absolute nothingness...that was the most defining moment' (P3). Almost simultaneously with the extraordinary encounter of the 'other' world, its peace and serenity, the dramatic realisation of the possibility of inexistence was described as a terrifying experience where participants struggled to keep their brain motivated in order to feel their physical bodies again. P3 elaborated: '...it was as if I was fighting something huge... and I kept telling myself "try harder, if you don't make it, there's death"... I felt I was engaged in a ferocious battle...'

Restoration of existence was perceived as soul's return to the body often accompanied by strong sensations such as the feeling of violent movement. P4 clarified: 'I remember (my soul) stepping into my body, feeling something akin to a shudder, and then I woke up...'

Conversely, two participants did not have any recollection of NDE. P2 found himself in the hospital 'not knowing where [he] was'. P6 was told he 'had a cardiac arrest... died and was resuscitated'.

3.3 | Transformation after the cardiac arrest experience

Participants' narratives conveyed the profound transformative effect of the cardiac arrest, which involved every aspect of their existence, physical cognitive, psychological social and spiritual. Two themes were revealed: 'Life transformation: the reality of survivorship', and 'Personal transformation: new meaning'. Participants became aware that the OHCA experience had seriously affected their lives.

3.3.1 | Life transformation: The reality of survivorship

Participants were thrown into a new reality, which encompassed new limitations and strains; to which they gradually adapted, therefore transforming their way of living and perceptions in life. Participants described physical, cognitive, emotional and relationship changes not as impairments, but rather as parts of their new reality, to which they made a conscious rational effort to adjust. In their new reality, they live in a more healthy and sensible way. P1 described: 'Many times, I tried to relive the life I used to live, but the past could not be unwritten'. Some participants felt stigmatised by their experiences, and they needed 'a lot of strength to deal with it' because people looked upon them 'differently' (P1). Additionally, the participants' mental skills and memory seemed afflicted. P5 reported: 'For 2-3 years, I could not remember any of this. Others told me about it'. In particular, participants with NDEs felt guilty associating previous unhealthy habits with the development of their OHCA: 'I

was immersed in an unhealthy lifestyle. I used to work from dusk till dawn...' (P4). P7 described that he had to deal with 'problems at work... there was stress...'. In addition to the guilt, the participants described their agony of re-experiencing a new OHCA episode, which triggered insecurity and fear. P1 highlighted: 'Whatever you do, you do it in fear. It's inside of you. I've got this problem that might affect me at any given moment'. Moreover, participants felt they were being a burden to their family and loved ones who supported them after the OHCA. One patient related: 'your family feels uneasy... they become overprotective. Whatever you do, they are worried about you' (P1). Simple things now held a special place in their daily routine like 'walk regularly, ... avoid eating heavy food, and ... drink lots of fluids...' (P4) to stay healthy.

3.3.2 | Personal transformation: New meaning

It seems that, after the OHCA, the 'true' meaning of life was gradually gaining ground in the conscience of most participants who felt they were maturing as human beings. Specifically, experiencing OHCA and NDE was 'as if a curtain was drawn back to finally [see] the world' (P3) and caused 'changes in [one's] entire life stance and people...' (P2). Participants also became more loving and forgiving. P5 resolved not to 'hurt anyone' even if someone hurts [him]. Life was approached differently, more meaningfully. P7 'stopped fussing about material goods...' which appeared now vain and lacked any essential value compared to what they had meant before. One survivor explained: 'going after money [and] possessions... at the end of the day... could go in vain...' (P2). Likewise, most participants learnt to stop 'stressing themselves over things...' (P2). Instead, they engaged into agreeable activities 'like, visit people [I] want to see, and have a good time...' (P3), or tried to do things that satisfied them: 'to have a good time in order to stay alive; nothing else...' (P4). In this new reality, participants felt a different and deep appreciation of common things once taken for granted; like waking up in the morning or seeing a baby laugh or play. Most importantly, surviving a cardiac arrest signified 'an ending to this (previous) life' (P3) and aroused the participants' sense of mortality and a pursuit for the meaning of being in the world and of having a soul. One participant wondered that there are 'billions of people on this earth... Where do these souls go? There must be something else...' (P5). Likewise, most participants 'believe[d] that the soul has no ending. It does go somewhere else... It just can't vanish into thin air...' (P7). Death was also perceived differently. Participants shared that they were no longer afraid of dying, even that they 'ready for death' and that death is 'beautiful' (P6). P5 highlighted: 'I used to be so scared of it; I'm no longer scared of death...'

4 | DISCUSSION

Our results show that OHCA is experienced as a powerful process of transformation, starting with the cardiac arrest episode itself, and

permeating every aspect of survivors' life. OHCA was a powerful encounter with strong spiritual and existential elements altering individuals' perceptions of their embodied self, time, relations and meanings, therefore affecting their *Being in the world*, which was termed as *Dasein* by Heidegger (1962). Confronting the possibility of death challenged participants to re-examine their entire life and inspired a transformation in their daily living (Forslund et al., 2014, 2017). According to Heidegger, beings become authentic when they care about the 'meaning of existence upon encountering the possibility of death' (Heidegger, 1962, p. 158–9). The existential modification our participants went through seems to have resulted in them becoming more authentic in the manner of being present in the world. Authenticity arises when the world is no longer taken as given, and individuals begin to *care* for the meaning of existence (Vouzavali et al., 2011).

In line with previous studies, our analysis suggests that OHCA survivors have greater appreciation of life and a heightened sense of purpose while they become more adaptive to the vicissitudes of life, more loving, compassionate and less materialistic (Bremer et al., 2009; Forslund et al., 2014; Forslund et al., 2017; Jahromi, 2021; Kamphuis et al., 2004; Ketildottir et al., 2014; Klemenc-Ketis, 2013; Lai et al., 2007). These effects bear strong spiritual elements, which is commensurate with participants describing their survival as a 'divine gift'. Religious and spiritual coping appear to be prevalent among survivors of severe cardiovascular disease including cardiac arrest (Ai & Hall, 2011; Momennasab et al., 2012). Spirituality is being described as the sense of connectedness to a higher power and to others and of a purpose and meaning in life, while it has been associated with improved health and wellbeing (Harrad et al., 2019). A retrospective cohort study recognised the importance of spirituality and meaning-making in overcoming this stressful life-threatening situation and that spirituality positively contributed to the quality of life in cardiac arrest patients (Wachelder et al., 2016).

Based on our findings, it is important to consider that although the life-changing and spiritual effects of OHCA may be similar across cultures, cultural influences must be considered (Jahromi, 2021; Momennasab et al., 2012). Our participants were Greek-Cypriots, population almost exclusively Christian Orthodox. Christianity has traditionally been an integral part of the ethnic identity of Greek-Cypriots (Cyprus Population, 2019) and the dominant Christian narrative may influence both the social construction of OHCA individuals' interpretations and meaning-making. Indeed, dominant Christian views may have shaped NDE narratives, historically (Vincent, 2003). This may in part explain our participants' interpretation of their survival, as a 'divine gift', implying a personified conception of God, which is more prevalent in Abrahamic religions. Moreover, other Greek cultural symbols were evident in participants' accounts of their experiences. The sign of the cross which was used by our participants in both their narratives and while retelling their story, is a prominent practice among Greek Orthodox Christians and conveys simultaneously a prayer for protection and one's hope in redemption (Clendenin, 2003, p.19). By forming the sign of the cross, the participants seemed to acknowledge their mortality, their

gratitude for their second chance in life, and a prayer for continued protection. The concept of the soul as a shadow is also deeply rooted in Greek folklore, probably dating as back as the Homeric poems (circa late 8th century BCE) (Bekiari et al., 2009). Contemporary conceptualizations of the soul among Greeks seem to incorporate the ancient notion of immaterial images, like smoke, which are beyond the grasp of the living (Rohde, 2014, p.5). Additionally, the mirror, is a prominent symbol of communicating with other worlds, including the world of the dead in Greek folklore (Center for the Research of Greek Folklore, n.d.). Moreover, staring at one's reflection is regarded as a death omen in Greek folk (Elkisch, 1957). Therefore, the description of the soul as a shadow in the mirror is a powerful symbol of the proximity of death.

OHCA drew our participants' attention to their mortality, but also caused them to fear a recurrent episode, in line with experiences among Swedish survivors (Forslund et al., 2014). The feeling of insecurity resulted in a more authentic presence in the world, coupled with a strive to regain one's self, which was no longer taken as given. Surviving a cardiac arrest is a traumatic experience and calls for mental and emotional adjustment (Haydon et al., 2020). Existing care guidelines for cardiac arrest survivors do not adequately address their complex care needs (Whitehead et al., 2020). In view of ours and others' findings, the process of personal transformation after OHCA needs to be recognised, validated and supported by healthcare professionals and family members, in order to fully support survivors in the process of embracing the new realities and inherent possibilities of survival.

The narratives revealed that participants found themselves thrown into a reality with a new set of limitations in every aspect of their life, as well as new possibilities. This is in line with the Heideggerian notion of *thrownness*, as the situation where *Being* finds itself in a before-hand factual world, of which he may not have complete understanding, but which is intimately disclosed since it is part of being in the world (Heidegger, 1962, p. 135). The participants illustrate the importance of *thrownness* as the point where they realised that they are confronted with a new beginning with their lived world being radically transformed. Participants' loved ones are also thrown into a new reality; without, however, having gone through a similar process of transformation. In this context, fretful anticipation of loss made participants' loved ones over-protective. Family members need practical and psychosocial support to cope with their loved one's needs after surviving a cardiac arrest and they need to be made aware of the necessary balance between their need for protection and the patients' need for autonomy (Sawyer et al., 2020).

Participants' reports add to the emerging theories that NDEs promote a stronger connection with one's inner spiritual self (Jahromi, 2021). The features of NDE – out of body experience, entering a transitional tunnel, encountering a bright light and finally emerging into it – described by participants are similar to previous reports (Ring, 1980). Nonetheless, there were significant differences in the way NDEs were presented. The evidence is mixed as to whether prevailing social conventions, cultural experiences and

religious notions influence NDE reports (Athappilly et al., 2006; Facco et al., 2015; Long, 2014). Previous studies have suggested that transcendental experiences are shaped by a dying patient's cultural and personal constructs (Schwaninger et al., 2002). However, a constancy of NDE themes across historical periods and cultures raise questions on whether NDEs have specific neural correlates (Charland-Verville et al., 2014), and several neurobiological mechanisms have been proposed (Nelson, 2015). Regardless of solid neurobiological explanations, NDEs become part of survivors' presence and meaning in the world. Therefore, it is important that health care professionals and loved ones recognise the experience of NDE, and support individuals in their journey of constructing meaning. It is noteworthy that participants with NDEs felt stigmatised (Moore & Greyson, 2017). Educating the public, health care professionals and the family on how to respond and relate to OHCA survivors with NDEs is important in supporting their journey of life transformation (Samoilo & Corcoran, 2020).

4.1 | Limitations

Heidegger's philosophy provides a framework for the exploration of existential experiences, nonetheless, there is ambiguity about its operationalisation into specific analytical methods (Gullick & West, 2020). Most participants in this study were male, possibly introducing a gender bias. More research is needed particularly regarding women and families' experiences with OHCA. We did not have eligibility limitations based on the time lapsed since the cardiac arrest. Therefore, participants' accounts may have been subject to memory decay, distortion and influenced by cultural narratives. Moreover, due to the homogeneous ethnicity of both participants and the majority of investigators, a cultural and religious bias cannot be excluded in the construction of shared meanings.

5 | CONCLUSIONS

A profound transformation of survivors' lives and existence was central in the experience of surviving OHCA, with strong spiritual elements, and themes bearing transcultural components of NDEs. The participants perceived having been given a 'divine gift', which was central in their construction of meaning. This motivated them to intentionally improve their quality of life and relationships, despite, several physical and psychosocial limitations. Even with these challenges, the narratives highlighted a newly acquired deep appreciation for the joy life, living and others. Based on these, construction of meaning and a heightened spirituality seem central in reconstructing life after OHCA.

Implications for practice

To achieve long-term recovery, cardiac care systems should implement tools to assess the multidimensional consequences of OHCA

experiences and incorporate rehabilitation programs addressing patient-specific goals for integrating the OHCA into their lives. Such programs could also address patients' fear of experiencing subsequent OHCA (Wagner et al., 2021). The role of spiritual care in OHCA has not been fully recognised, and practitioners lack specific guidance (Hosseini et al., 2015). Survivors may benefit from follow ups with the psychologist, psychiatric or spiritual care providers for tailored services. Healthcare providers need to be educated on the psychological, mental, social and spiritual needs of OHCA survivors with NDE. Recognising the psychosocial and spiritual concerns of surviving OHCA is important in interpreting care priorities as well as supporting OHCA survivors and their families to live well. There is a need to understand the existential impact of OHCA and the types of meaning-making and experiences involved in coping and the holistic needs of individuals. This understanding can be useful in planning care pathways for the OHCA survivors. Nurses need to hone skills on how to support, respond and relate to OHCA survivors. For instance, nurses should give attention to expressions of the survivors' ambiguous and fragmentary expressions during the hospital stay. This is vital in supporting their journey of life transformation. Likewise, family, or prehospital emergency personnel can assist survivors to know the fragmented memories and find important connections. Moreover, educating nurses who offer Psychosocial Nursing Therapy Following Sudden Cardiac Arrest can help them understand survivors' psychosocial and spiritual fears and, hence, assist to reduce psychological distress, and improve coping. Additionally, understanding the psychological, mental, social, and spiritual needs of OHCA survivors can play important role in facilitating interventions such as cardiac arrest support groups, to help support survivors' personal transformation and adaptation to the new circumstances. It is also important to recognise the importance of culture and/or religion on individuals/meaning-making and coping and to further research in this field.

AUTHOR CONTRIBUTIONS

Maria Aristidou: Conceptualisation, Data curation, Formal Analysis, Investigation, Writing – original draft; **Maria Karanikola:** Supervision, Methodology, Validation, Writing – review & editing; **Elizabeth Kusi-Appiah:** Writing – review & editing; **Anna Koutroubas:** Formal Analysis, Validation; **Usha Pant:** Writing – review & editing, Validation; **Foteini Vouzavali:** Formal Analysis, Validation; **Ekaterini Lambrinou:** Supervision, Methodology, Validation; **Elizabeth Papathanassoglou:** Conceptualization, Methodology, Project administration, Formal Analysis, Resources, Supervision, Validation, Writing – review & editing.

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The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study will be available on request from the corresponding author upon reasonable request.

ORCID

Usha Pant  <https://orcid.org/0000-0001-9105-9427>

REFERENCES

- Abu, H. O., Ulbricht, C., Ding, E., Allison, J. J., Salmoirago-Blotcher, E., Goldberg, R. J., & Kiefe, C. I. (2018). Association of religiosity and spirituality with quality of life in patients with cardiovascular disease: A systematic review. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, 27(11), 2777–2797. <https://doi.org/10.1007/s11136-018-1906-4>
- Ai, A. L., & Hall, D. E. (2011). Divine love and deep connections: A long-term followup of patients surviving cardiac surgery. *Journal of Aging Research*, 2011, 841061. <https://doi.org/10.4061/2011/841061>
- Aristidou, M., Vouzavali, F., Karanikola, M. N., Lambrinou, E., & Papatheanassoglou, E. (2018). A meta-ethnography of out-of-hospital cardiac arrest Survivors' meanings on life and death. *The Journal of Cardiovascular Nursing*, 33(3), E10–E20. <https://doi.org/10.1097/JCN.0000000000000467>
- Athappilly, G. K., Greyson, B., & Stevenson, I. (2006). Do prevailing societal models influence reports of near-death experiences?: A comparison of accounts reported before and after 1975. *The Journal of Nervous and Mental Disease*, 194(3), 218–222. <https://doi.org/10.1097/01.nmd.0000202513.65079.1e>
- Bekiar, A., Famissis, K., Kritikos, A., Nikitaras, N., & Kriemadis, T. (2009). The body and the soul in Homer, the Orphics, Heraclitus, Pythagoras and Socrates from the critical standpoint of philosophy and sports pedagogy. *Studies in Physical Culture and Tourism*, 16(2), 155.
- Benner, P. (1985). Quality of life: A phenomenological perspective on explanation, prediction, and understanding in nursing science. *ANS. Advances in Nursing Science*, 8(1), 1–14. <https://doi.org/10.1097/00012272-198510000-00004>
- Bremer, A., Dahlberg, K., & Sandman, L. (2009). To survive out-of-hospital cardiac arrest: A search for meaning and coherence. *Qualitative Health Research*, 19(3), 323–338. <https://doi.org/10.1177/1049732309331866>
- Büssing, A., Ostermann, T., & Matthiessen, P. F. (2005). Role of religion and spirituality in medical patients: Confirmatory results with the SpREUK questionnaire. *Health and Quality of Life Outcomes*, 3, 10. <https://doi.org/10.1186/1477-7525-3-10>
- Center for the Research of Greek Folklore. (n.d.). <http://repository.kentrolaografias.gr/xmlui/handle/20.500.11853/295938>. Accessed Dec 23, 2022.
- Charland-Verville, V., Jourdan, J. P., Thonnard, M., Ledoux, D., Donneau, A. F., Quertemont, E., & Laureys, S. (2014). Near-death experiences in non-life-threatening events and coma of different etiologies. *Frontiers in Human Neuroscience*, 8, 203. <https://doi.org/10.3389/fnhum.2014.00203>
- Chrysoloras, N. (2010). *Religion and national identity in the Greek and Greek-Cypriot political cultures*. London School of Economics and Political Science (United Kingdom).
- Clendenin, D. B. (2003). *Eastern orthodox Christianity: A Western perspective*. Baker Academic.
- Cyprus Population: Demographic Situation, Languages and Religions. (2019). Eurydice. https://eacea.ec.europa.eu/national-policies/eurydice/content/population-demographic-situation-languages-and-religions-15_en
- Diekelmann, N. L., Allen, D. G., Tanner, C. A., Vera, H., & Gothler, A. (1989). *The NLN criteria for appraisal of baccalaureate programs: A critical hermeneutic analysis* (6th ed.). National League for Nursing.
- Elkisch, P. (1957). The psychological significance of the mirror. *Journal of the American Psychoanalytic Association*, 5(2), 235–244. <https://doi.org/10.1177/000306515700500202>
- Facco, E., Agrillo, C., & Greyson, B. (2015). Epistemological implications of near-death experiences and other non-ordinary mental expressions: Moving beyond the concept of altered state of consciousness. *Medical Hypotheses*, 85(1), 85–93. <https://doi.org/10.1016/j.mehy.2015.04.004>
- Forslund, A. S., Jansson, J. H., Lundblad, D., & Söderberg, S. (2017). A second chance at life: people's lived experiences of surviving out-of-hospital cardiac arrest. *Scandinavian Journal of Caring Sciences*, 31(4), 878–886. <https://doi.org/10.1111/scs.12409>
- Forslund, A. S., Zingmark, K., Jansson, J. H., Lundblad, D., & Söderberg, S. (2014). Meanings of people's lived experiences of surviving an out-of-hospital cardiac arrest, 1 month after the event. *The Journal of Cardiovascular Nursing*, 29(5), 464–471. <https://doi.org/10.1097/JCN.0b013e3182a08aed>
- Fouka, G., Plakas, S., Taket, A., Boudioni, M., & Dandoulakis, M. (2012). Health-related religious rituals of the Greek orthodox church: Their uptake and meanings. *Journal of Nursing Management*, 20(8), 1058–1068. <https://doi.org/10.1111/jonm.12024>
- Greyson, B. (2015). Western scientific approaches to near-death experiences. *Humanities*, 4(4), 775–796. <https://doi.org/10.3390/h4040775>
- Gullick, J., & West, S. (2020). Heideggerian hermeneutic phenomenology as method: Modelling analysis through a meta-synthesis of articles on being-towards-death. *Medicine, Health Care, and Philosophy*, 23(1), 87–105. <https://doi.org/10.1007/s11019-019-09911-9>
- Harrad, R., Cosentino, C., Keasley, R., & Sulla, F. (2019). Spiritual care in nursing: An overview of the measures used to assess spiritual care provision and related factors amongst nurses. *Acta Bio-Medica: Atenei Parmensis*, 90(4-5), 44–55. <https://doi.org/10.23750/abm.v90i4-5.8300>
- Haydon, G., van der Riet, P., & Inder, K. (2020). The experience of returning home after surviving cardiac arrest: A narrative inquiry. *Nordic Journal of Nursing Research*, 40(4), 188–196. <https://doi.org/10.1177/2057158520932348>
- Heidegger, M. (1962). *Being and time*. Blackwell Publishing.
- Hennink, M. M., Kaiser, B. N., Atkinson, P., Delamont, S., Cernat, A., Sakshaug, J. W., & Williams, R. A. (2020). *Saturation in qualitative research*. SAGE Publications Ltd.
- Hosseini, M., Davidson, P. M., Khoshknab, M. F., & Nasrabadi, A. N. (2015). Experience of spiritual Care in Cardiac Rehabilitation: An interpretative phenomenological analysis. *The Journal of Pastoral Care & Counseling: JPCC*, 69(2), 68–76. <https://doi.org/10.1177/1542305015586347>
- Ingham-Broomfield, R. (B.). (2014). A nurses' guide to quantitative research. *Australian Journal of Advanced Nursing*, 32(2), 32–38.
- Jahromi, A. G. (2021). The aftereffects of near-death experiences on the lives of near-death experiencers: A qualitative study. *Journal of Qualitative Research in Health Sciences*, 10(2), 83–91. <https://doi.org/10.22062/jqr.2021.193576.0>
- Kamphuis, H. C., Verhoeven, N. W., Leeuw, R., Derksen, R., Hauer, R. N., & Winnubst, J. A. (2004). ICD: A qualitative study of patient experience the first year after implantation. *Journal of Clinical Nursing*, 13(8), 1008–1016. <https://doi.org/10.1111/j.1365-2702.2004.01021.x>
- Karanikola, M. (2019). Content analysis in critical and emergency care: A discussion paper. *CONNECT: The World of Critical Care Nursing*, 13(1), 8–23. <https://doi.org/10.1891/1748-6254.13.1.8>
- Ketilisdottir, A., Albertsdottir, H. R., Akadottir, S. H., Gunnarsdottir, T. J., & Jonsdottir, H. (2014). The experience of sudden cardiac arrest: Becoming reawakened to life. *European Journal of Cardiovascular Nursing*, 13(5), 429–435. <https://doi.org/10.1177/1474515113504864>
- King, O. (2021). Two sets of qualitative research reporting guidelines: An analysis of the shortfalls. *Research in Nursing & Health*, 44(4), 715–723. <https://doi.org/10.1002/nur.22157>

- Klemenc-Ketis, Z. (2013). Life changes in patients after out-of-hospital cardiac arrest: The effect of near-death experiences. *International Journal of Behavioral Medicine*, 20(1), 7–12. <https://doi.org/10.1007/s12529-011-9209-y>
- Lai, C. F., Kao, T. W., Wu, M. S., Chiang, S. S., Chang, C. H., Lu, C. S., Yang, C. S., Yang, C. C., Chang, H. W., Lin, S. L., Chang, C. J., Chen, P. Y., Wu, K. D., Tsai, T. J., & Chen, W. Y. (2007). Impact of near-death experiences on dialysis patients: A multicenter collaborative study. *American Journal of Kidney Diseases: The Official Journal of the National Kidney Foundation*, 50(1), 124–132. <https://doi.org/10.1053/j.ajkd.2007.04.021>
- Long, J. (2014). Near-death experience. Evidence for their Reality. *Missouri Medicine*, 111(5), 372–380.
- Martial, C., Cassol, H., Charland-Verville, V., Pallavicini, C., Sanz, C., Zamberlan, F., Vivot, R. M., Erowid, F., Erowid, E., Laureys, S., Greyson, B., & Tagliazucchi, E. (2019). Neurochemical models of near-death experiences: A large-scale study based on the semantic similarity of written reports. *Consciousness and Cognition*, 69, 52–69. <https://doi.org/10.1016/j.concog.2019.01.011>
- Martial, C., Simon, J., Puttaert, N., Gosseries, O., Charland-Verville, V., Nyssen, A. S., Greyson, B., Laureys, S., & Cassol, H. (2020). The near-death experience content (NDE-C) scale: Development and psychometric validation. *Consciousness and Cognition*, 86, 103049. <https://doi.org/10.1016/j.concog.2020.103049>
- McCaffrey, G., Raffin-Bouchal, S., & Moules, N. J. (2012). Hermeneutics as research approach: A reappraisal. *International Journal of Qualitative Methods*, 11, 214–229. <https://doi.org/10.1177/160940691201100303>
- Momennasab, M., Moattari, M., Abbaszade, A., & Shamshiri, B. (2012). Spirituality in survivors of myocardial infarction. *Iranian Journal of Nursing and Midwifery Research*, 17(5), 343–351.
- Moore, L. E., & Greyson, B. (2017). Characteristics of memories for near-death experiences. *Consciousness and Cognition*, 51, 116–124. <https://doi.org/10.1016/j.concog.2017.03.003>
- Munhall, P. L. (2012). *Nursing research: A qualitative perspective* (5th ed.). Jones & Bartlett Learning.
- Namey, E., Guest, G., McKenna, K., & Chen, M. (2016). Evaluating bang for the buck: A cost-effectiveness comparison between individual interviews and focus groups based on thematic saturation levels. *American Journal of Evaluation*, 37, 425–440. <https://doi.org/10.1177/1098214016630406>
- Nelson, K. (2015). Near-death experiences-neuroscience perspectives on near-death experiences. *Missouri Medicine*, 112(2), 92–98.
- Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Ring, K. (1980). *Life at death: A scientific investigation of the near-death experience*. Coward, McCann & Geoghegan.
- Rohde, E. (2014). *Psyche: The cult of souls and the belief in immortality among the Greeks*. Routledge.
- Samoilo, L., & Corcoran, D. (2020). Closing the medical gap of Care for Patients who Have had a near-death experience. *Narrative Inquiry in Bioethics*, 10(1), 37–42. <https://doi.org/10.1353/nib.2020.0011>
- Sawyer, K. N., Camp-Rogers, T. R., Kotini-Shah, P., Del Rios, M., Gossip, M. R., Moitra, V. K., Haywood, K. L., Dougherty, C. M., Lubitz, S. A., Rabinstein, A. A., Rittenberger, J. C., Callaway, C. W., Abella, B. S., Geocadin, R. G., Kurz, M. C., & American Heart Association Emergency Cardiovascular Care Committee; Council on Cardiovascular and Stroke Nursing; Council on Genomic and Precision Medicine; Council on Quality of Care and Outcomes Research; and Stroke Council. (2020). Sudden cardiac arrest survivorship: A scientific statement from the American Heart Association. *Circulation*, 141(12), e654–e685. <https://doi.org/10.1161/CIR.0000000000000747>
- Schwanger, J., Eisenberg, P. R., Schechtman, K. B., & Weiss, A. N. (2002). A prospective analysis of near-death experiences in cardiac arrest patients. *Journal of Near-Death Studies*, 20(4), 215–232. <https://doi.org/10.1023/a:1015258818660>
- Van Lommel, P., Van Wees, R., Meyers, V., & Elfferich, I. (2017). Near-death experience in survivors of cardiac arrest: A prospective study in The Netherlands. In *Parapsychology* (pp. 91–97). Routledge.
- Vincent, K. R. (2003). The near-death experience and Christian universalism. *Journal of Near-Death Studies*, 21(3), 57–71.
- Vouzavali, F. J., Papathanassoglou, E. D., Karanikola, M. N., Koutroubas, A., Patiraki, E. I., & Papadatou, D. (2011). 'The patient is my space': Hermeneutic investigation of the nurse-patient relationship in critical care. *Nursing in Critical Care*, 16(3), 140–151. <https://doi.org/10.1111/j.1478-5153.2011.00447.x>
- Wachelder, E. M., Moolaert, V. R., van Heugten, C., Gorgels, T., Wade, D. T., & Verbunt, J. A. (2016). Dealing with a life changing event: The influence of spirituality and coping style on quality of life after survival of a cardiac arrest or myocardial infarction. *Resuscitation*, 109, 81–86. <https://doi.org/10.1016/j.resuscitation.2016.09.025>
- Wagner, M. K., Berg, S. K., Tang, L. H., Stenbaek, D. S., Hassager, C., & Missel, M. (2021). Understanding the lived experiences of short- and long-term consequences on daily life after out-of-hospital cardiac arrest. a focus group study. *Journal of Advanced Nursing*, 77(3), 1442–1452. <https://doi.org/10.1111/jan.14707>
- Whitehead, L., Tierney, S., Biggerstaff, D., Perkins, G. D., & Haywood, K. L. (2020). Trapped in a disrupted normality: Survivors' and partners' experiences of life after a sudden cardiac arrest. *Resuscitation*, 147, 81–87. <https://doi.org/10.1016/j.resuscitation.2019.12.017>
- Wilder Schaaf, K. P., Artman, L. K., Peberdy, M. A., Walker, W. C., Ornato, J. P., Gossip, M. R., Kreutzer, J. S., & Virginia Commonwealth University ARCTIC Investigators. (2013). Anxiety, depression, and PTSD following cardiac arrest: A systematic review of the literature. *Resuscitation*, 84(7), 873–877. <https://doi.org/10.1016/j.resuscitation.2012.11.021>
- Woollacott, M., & Peyton, B. (2021). Verified account of near-death experience in a physician who survived cardiac arrest. *Explore (New York, N.Y.)*, 17(3), 213–219. <https://doi.org/10.1016/j.explore.2020.03.005>
- Yaow, C. Y. L., Teoh, S. E., Lim, W. S., Wang, R. S. Q., Han, M. X., Pek, P. P., Tan, B. Y., Ong, M. E. H., Ng, Q. X., & Ho, A. F. W. (2022). Prevalence of anxiety, depression, and post-traumatic stress disorder after cardiac arrest: A systematic review and meta-analysis. *Resuscitation*, 170, 82–91. <https://doi.org/10.1016/j.resuscitation.2021.11.023>

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