

Kardiyak Arrest Sonrası Yaşama Dönenlerde Ölüm Eşiğine Yaklaşma Deneyimlerinin İncelenmesi: Nitel Bir Çalışma

Investigation of the Approaches to The Near-Death Experiences in Patients Returning to Life After Cardiac Arrest: A Qualitative Study

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ÖZET

Amaç: Kardiyak arrest (KA) geçiren ve kardiyopulmoner resüsitasyon uygulanan hastaların kognitif süreçler yaşayabileceği, bazılarının ise arrest süresince yaşadıkları olayları bilincin varlığını gösterecek şekilde ve doğru olarak anlatabildikleri belirtilmektedir. Bu araştırmada kardiyak arrest sonrası yaşama dönenlerde ölüm eşiğine yaklaşma deneyimlerinin incelenmesi amaçlandı. **Gereç ve Yöntem:** Araştırma niteliksel tipte yapıldı. Özel bir hastanenin kardiyoloji yoğun bakım kliniklerinde yatışı yapılmış ve bu süreçte arrest olup başarılı resüsitasyon ile yaşama geri dönmüş 12 hasta örnekleme oluşturdu. Örneklem seçiminde amaçlı örnekleme yöntemi kullanıldı. Bu kliniklerin alınma nedeni araştırmacıların birinin bu kurumda çalışıyor olması ve bu hastalara başarılı resüsitasyon yaparak yaşama geri döndürmüş olmasıdır. Veriler yüz yüze derinlemesine görüşme yöntemi ile Mart-Mayıs 2019 tarihleri arasında toplandı. Derinlemesine görüşme; literatür incelemesi ve uzman görüşü alınarak belirlenen anahtar sorular ve her bir anahtar soruyu açıcı rehber soruların bulunduğu “Yapılandırılmamış Soru Formu”, “Bireysel Bilgi Formu ile Bilgilendirme ve Onam Formu kullanıldı. Literatüre dayalı olarak oluşturulan taslak form üzerinde iki akademisyen ve alandan bir uzman hekim ile görüşüldü, anlam bozuklukları ve eksiklikler giderildi. Görüşmeler hastanenin toplantı odasında gerçekleştirildi. Yapılan görüşmelerin her biri yaklaşık 40-50 dakika sürdü ve görüşmeler hem katılımcılar hem de araştırmacılar tarafından yeni bir bilgi kalmayınca kadar devam edildikten sonra sonlandırıldı. Görüşmelerde; gizlilik esasına dayalı olarak katılımcılara kod verildi (Kod: K.1, E.1) ve ses kaydı alındı. Araştırmada görüşmeler sonunda elde edilen veriler ses kayıt cihazından bilgisayara aktarıldı. Verilerin analizinde kodlamaya dayalı içerik analizi kullanıldı. Bu analizde birbirine benzeyen veriler belirli kavramlar ve temalar altında sınıflandırıldı ve anlaşılır biçimde düzenlenerek yorumlandı. Bireysel bilgilerin frekans ve yüzdeleri hesaplanıp ifade edildi. Elde edilen veriler ayrıntılı olarak raporlaştırıldı ve doğrudan alıntılara yer verilerek araştırmanın geçerliliği sağlandı. **Bulgular:** Araştırmadan elde edilen bulgulara göre katılımcıların %75’i erkek, yaş ortalaması 63, %50’si üniversite mezunu, dini eğilim olarak %41,7’si Deist, %50’si, Dindar olarak kendilerini tanımladı. Araştırmaya katılanların %75’i bunu bir ölüm deneyimi olarak değerlendirdi. Katılımcıların görüşme sorularına verdikleri yanıtlar genel olarak incelendiğinde bu süreçte “rahatlama” ve “huzur hissi” nin olduğu, “zamanın hızla geçtiği”, “derin bir karanlıktan ışığa çıkıldığı”, “acı ve acının hissedilmediği”, hayata ikinci kez dönmenin “mutluluğunu” yaşamın çok değerli olduğunu ifade ettikleri belirlendi. **Sonuç:** Kardiyak arrest sonrası yaşama dönenlerde ölme eşiğine yaklaşma deneyimlerinin incelendiği bu çalışmada katılımcıların büyük kısmı bu süreci “ölüm deneyimi” olarak kabul ettiklerini belirtti. Ayrıca görüşme yapılan hastaların kardiyak arrest sürecinde yaşadıkları olayları tanımlama şekilleri ve ifadeleri bilincin varlığını gösterecek şekilde; “huzur hissi”, “derin bir karanlıktan ışığa çıkış” ifadeleri ile açıkladıkları belirlendi. Araştırmanın daha geniş örnekleme tekrarlanmasının yanı sıra, arrest sürecinde görev alan sağlık profesyonellerinin bu konuda bilgilendirilmeleri önerilmektedir.

Keywords: Kardiyak arrest, ölüme yaklaşma deneyimi, kardiyopulmoner resüsitasyon

ABSTRACT

Objectives: Patients with cardiac arrest (CA) who undergo cardiopulmonary resuscitation may experience cognitive processes, and some may accurately describe the events experienced during the arrest, indicating the presence of consciousness. The aim of this study was to investigate the approaches to near death experiences in patients who returned to life after cardiac arrest. **Materials and Methods:** The study was conducted in qualitative type. The sample consisted of 12 patients hospitalized in the

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cardiology intensive care clinics of a private hospital who were arrested and returned to life with successful resuscitation. Purposeful sampling method was used in sample selection. The reason for these clinics is that one of the researchers is working at this institution and has successfully resuscitated these patients and returned them to life. Data were collected between March and May 2019 by face-to-face interview method. In-depth interview; Key questions determined by literature review and expert opinion and forms containing guiding questions for each key question were used. These forms were Semi-Structured Questionnaire, Individual Information Form and Informing and Consent Form. Two academicians and one specialist physician were interviewed on the draft form based on the literature, meaning disorders and deficiencies were resolved. Interviews were held in the meeting room of the hospital. Each of the interviews lasted approximately 40-50 minutes and was terminated after the interviews were continued by both participants and researchers until there was no more information available. Interview; On the basis of confidentiality, participants were given a code (Code: K.1, E.1) and audio recording was taken. The data obtained from the interviews were transferred from the voice recorder to the computer. Coding-based content analysis was used for data analysis. In this analysis, similar data were classified under certain concepts and themes and interpreted in a comprehensible manner. Frequency and percentages of individual information were calculated and expressed. The data obtained were reported in detail and the validity of the study was ensured by direct quotations. Results: According to the findings of the study, 75 % of the participants were male, the average age was 63, 50% were university graduates, as religious tendency, 41.7% Deist and 50% as religious. 75% of the respondents evaluated this as a death experience. When the answers given by the participants to the interview questions were examined in general, it was determined that there was “a feeling of relaxation and serenity”, “time passed rapidly, light emitted from a deep darkness”, “pain and pain were not felt”, and the happiness of returning to life for a second time was very valuable. Conclusion: In this study where the experience of approaching the threshold of dying was examined in those who returned to life after cardiac arrest, most of the participants stated that they accepted this process as a “death experience.. In addition, the forms and expressions of the interviewed patients describing the events they experienced during the cardiac arrest process indicate the presence of consciousness; The feeling of peace, from a deep darkness to light with expressions were identified. In addition to repeating the study with a larger sample, it is recommended that health professionals involved in the arrest process be informed about this issue.

Keywords: Cardiac Arrest, The Near-Death Experiences, Cardiopulmonary Resuscitation

INTRODUCTION

Cardiac arrest is an important health problem that causes the death of several million people worldwide each year (Nichol, et al., 2008; Merchant, et al., 2011; Go, et al., 2013). Cardiopulmonary arrest is a cessation of respiratory and cardiac activity. Cardiopulmonary resuscitation is an emergency medical intervention to provide sufficiently oxygenated blood to body in order to maintain the functions of vital organs to person who has stopped breathing or circulation suddenly and unexpectedly (Daniele, 2012; Mackenney and Soar, 2013). Modern Cardiopulmonary Resuscitation applications started with introducing methods of opening respiratory tract by Peter Safar et al. in 1959 and applications of external cardiac massage by William Kouwenhoven et al. in 1960. However, resuscitation attempts on humans have a long history dating back centuries (Çertuğ, 2010). After the initiation of Modern Cardiopulmonary Resuscitation applications, in the vast majority of studies about cardiac arrest, treatments that can either prevent cardiac arrest or make resuscitation, which applied after the development of cardiac arrest, more effective were addressed. However, studies about cognitive functions during resuscitation and the psychological consequences of experiencing cardiac arrest have also started to be conducted in recent years (Mackenney and Soar, 2013). In these studies, it was found that patients described similar phenomenon such as sense of tranquillity, a tunnel and a bright light, seeing dead relatives, a life review, out-of-body experience (OBE) and entering a heavenly environment.

Near-death experiences (NDE) include emotional, self-related, spiritual and mystical perceptions and feelings,

occurring in situations close to death or in other situations of imminent physical or emotional danger (Greyson 2003). There is no uniformly accepted definition of near-death experience. Definitions of NDE with some variability have been used throughout the 35 plus years that NDE has been the subject of scholarly investigation. For my retrospective investigations, an NDE was required to have both a near-death and experience component. Individuals were considered to be “near-death” if they were so physically compromised that if their condition did not improve they would be expected to irreversibly die. Near-death experiencers (NDErs) included in my investigations were generally unconscious and may have required cardiopulmonary resuscitation. The “experience” component of an NDE had to occur when they were near death. Also, the experience had to be reasonably lucid, which excluded fragmentary or brief disorganized memories. For an experience to be classified as an NDE, there had to be a score of seven or above on the NDE Scale. The NDE Scale asks 16 questions about the NDE content and is the most validated scale to help distinguish NDEs from other types of experiences (Greyson 2003).

Moody, who stated that the mentioned experiences are generally experienced when the patient is unconscious and causes a more spiritual and social orientation and decreased fear of death later in their lives, also defined this situation as Near Death Experiences (NDE) (Çertuğ, 2010). The concept of Near Death Experience, which is most commonly used to describe this experience, was used by Raymond Moody in the early 1970s firstly (Çertuğ, 2010). However, Sam Parnia, who has recently attracted attention with his TDE (Threshold



of Death Experience) studies, suggested that the use of “Near Death Experience” term is incorrect since the patients go beyond the death line in this experiences; therefore, the usage of “Death Experience” (Greyson 2003). is more appropriate. The near death experience is the incidents in which spirit of people, who are considered clinically dead because of the reasons like heart attack, birth, traffic accident and other accidents, go to different place or realm by leaving their physical bodies, and they watch themselves and what is around them from outside their bodies, and they perceive phenomena such as intense love, peace, light and relatives that passed away (Uysal, 2018; Engmann and Turnaeva. 2013; Shushan, 2009; Khanna, and Greyson, 2014). There are currently three different sets of explanations for the occurrence of NDEs: (1) physiological or pharmacological processes accompanying the process of dying; (2) a psychological response to the perceived threat of death; (3) a transcendental experience in the same category as the mystical (peak) experiences described by Bucke (Bucke, 1923) and later by Maslow. Since 1970s, patients' experiences have examined in many retrospective and prospective cardiac arrest studies, including approaching death. It has been stated that those who had cardiac arrest and cardiopulmonary resuscitation may experience cognitive processes while some people can accurately describe the events they experienced during the arrest in a way that shows the presence of the consciousness (Çertuğ, 2010). However, none of the studies have revealed the formation mechanisms of cognitive processes and near-death experiences during cardiac arrest. On the other hand, many theories have been proposed for the formation of approaching near-death experiences (Çertuğ, 2010; Khanna, and Greyson, 2014; Parnia, et al., 2007).

The argument in favour of a psychological explanation is based on observations made from retrospective cases indicating that NDEs may have occurred in those who have not been physically close to death or in those who have experienced such a phenomena just before a life threatening accident in which they did not lose consciousness. Other studies have indicated cultural differences between NDEs, although some of the core features are similar (Parnia, 2001).

Most of the people with cardiac arrest generally do not have a good quality of life, but also it was shown in many studies that there can be behavioural, cognitive and emotional disorders and posttraumatic stress disorder that starting right after the arrest. In addition, it has been determined that having near-death experiences also create long-term protective effects psychologically (Khanna and Greyson, 2014; Bucke, 1923; Parnia and Setal, 2007; Parnia, et al., 2001; Parnia and Fenwick., 2002). In the same studies, it is recommended that patients with cardiac arrest can be monitored by trained professional healthcare personnel whether there are depressions, post-traumatic stress disorder, emotional or other cognitive disorders or not, and treated appropriately (Khanna and Greyson, 2014; Bucke, 1923; Parnia and Setal, 2007; Parnia, et al., 2001; Parnia and Fenwick., 2002; Martial, et al., 2020). Scientific investigation of NDEs has accelerated over the past decades in part because of the improvement of resuscitation

techniques. As a consequence, these non-ordinary states of consciousness have been increasingly reported, with an incidence estimated around 10–23% after recovery from cardiac arrest but only in 3% after traumatic brain injury. Prototypical NDEs can also emerge in other situations, such as during meditation or syncope, when there is an absence of severe physiological insults to brain functioning. These are referred to as near-death-like experiences. Not all NDEs are pleasant and these experiences are described as nightmarish in about 14% of cases (Martial, et al., 2020).

Since the past three decades, considerable work has been undertaken to describe NDEs in sufficient details, however, most studies have been using closed NDE questionnaires in order to identify the presence of an NDE and assess this phenomenon (e.g) (Charland-Verville et al. 2014; Palmieri et al. 2014). Yet, previous studies (Palmieri, et al. 2014; Martial et al., 2017; Moore and Greyson 2017) have shown that NDEs memories contained more characteristics than other memories of imagined and real events, which highlights the fact that we possess very rich and detailed narratives of these experiences. We therefore aimed to examine all the details stored in NDEs narratives using a qualitative thematic analysis. In this study, it was aimed to examine the approaching the death threshold experience in those who returned to life after cardiac arrest. It is considered that the findings obtained by this purpose will contribute to informing the healthcare professionals involved in the arrest process.

MATERIAL AND METHOD

The Type of the Study

In order to obtain general and in-depth information about rare cases such as the near-death experiences, a qualitative subject-centred (topical) phenomenological interview technique that addressing the inner worlds of people deeply was used by applying qualitative research method.

Although a few studies have been conducting text analysis on NDEs narratives (Lange et al., 2015; Hou et al., 2013), reports of cardiac arrest survivors have never been, to our knowledge, analysed using a rigorous qualitative thematic method. Thematic analysis is “a method for identifying, analyzing and reporting patterns within data” commonly used in qualitative research. This method promotes the classification of the data into thematic categories as well as the examination of “all the cases in the study to make sure that all the manifestations of each theme have been accounted for and compared”. Themes are patterns across data sets that are essential to a better description of a phenomenon. Therefore, thematic analysis can be used to develop taxonomies or classifications about a phenomenon (Cassol, et al., 2018). Furthermore, well-established guidelines for applying and assessing qualitative methods are nowadays available (Tong et al., 2007), which have increased their use in medical disciplines (Cassol, et al., 2018). The description of a NDE using closed scales can result in the overlooking of relevant features that might have



been experienced by NDErs but that are not listed in NDE questionnaires. Therefore, this study aims to explore the interest of a qualitative approach, specifically thematic analysis, to better portray NDEs that follow a cardiac arrest based on self-reported narratives.

The Population and the Sample of the Research

The research consists of patients who were hospitalized in the cardiology intensive care clinics of a private hospital operating in Istanbul between March-May 2019. In this process, 18 patients who were arrested and returned to life with successful resuscitation and who were at least one month after resuscitation constituted the sample. However, since 6 patients did not accept to participate in the study, it was performed with 12 patients. The reason for taking these clinics is that one of the researchers is a specialist cardiologist working in this institution and he successfully resuscitated these patients between March-May 2019 and brought them back to life. In this study, the participants were determined by purposive sampling method. The purposive sampling method is preferred since it contains more than one sampling type. Instead of size of the group, it was considered important that the working group provided the information needed by the research. Since the number of people to be included in the study for qualitative research is not specified in the literature, the study is completed when the desired saturation in this research is reached, in other words, when the data repeats itself (Baltacı,2018). On the other hand, the fact of experience was rare and the individuals were not open to sharing their experiences were also effective in the stay of the working group with 12 people. The research was conducted in between March and May 2019. Inclusion criteria for the study;

- i.Over 18 years old and able to communicate
- ii.Patient with successful resuscitation and at least 1 month after resuscitation
- iii.The patient who agreed to participate in the study

The Data Collection Tools

In the in-depth interview; key questions that determined by literature review and expert opinion and Semi-Structured Questionnaire, Individual Information Form and Informing and Unstructured Questionnaire that containing guiding questions for each key question were used.

Individual Information Form: It was prepared in that way that the questions about religious beliefs before the experience, education status, gender, age, place of resident, presence of chronic disease and diagnosed disease be included.

Unstructured Questionnaire: This form was created by the researchers by scanning the literature. The scale was not used, but the most used scales in the literature were used (Dein, 2016; Greyson,1983; Greyson, 2001; Greyson,2006; Greyson, et al.,2012;Katz, et al.,2017;Kelly, 2001;Kellehear,1993), (Table 1).On the draft form that evaluating the threshold of death experience based on the literaturef, it was discussed with two academicians and a specialist physician from the field, and semantic problems and deficiency of it are fixed. Unstructured questionnaire was formed of two parts. It was designed that in the first part, to reveal the elements and basic characteristics of death threshold experience, and in the second part, to reveal that whether any difference about religious, spiritual, emotional, behavioural and ideational is arise in the person after experience or not, whether their viewpoint about death is changed or not, whether they feel special due to this experience or not. Then, a preliminary application was made with a participant to determine whether the questions were understood or not. The final interview form was created in which questions to be asked to all participants were collected with 22 questions that were found to be successful in preliminary application without neglecting the possibility of asking side and sub-questions. It was planned in a way that it will allow the participant to have a more efficient thinking process by paying attention to being initial questions general, easy and incentive to answer the person who experienced this, and to be clustered according to their interests.



Table 1: Unstructured Questionnaire

How would you describe this situation you are experiencing?	1. How did you feel during this process? How was your state of experiencing a sense of peace or pleasure? Incredible peace or joy, How was your feeling of Joy? How was your feeling of pain?
	2. How did you feel, Happiness, goodbye, who would you like to say goodbye to?
How would you describe your state of thought and emotion?	1. What was the speed of your thoughts? faster than usual? Incredibly fast?
	2. What do you think about your life being like a storyboard or your past being staged? Have scenes from your past come back to you? Do you remember your past events?
	3. What did you think about yourself, others and the universe during this process?
	4. Have you thought about everything about yourself and others? Do you think about the universe?
	5. How did you feel about a sense of harmony or oneness with the universe?
	6. Did you feel merged with the world or as one body?
	7. How did you feel about your body during this process? How was your feeling of leaving the body? Did you feel separated? How was your awareness of your body? What did you remember?
How was the concept of time for you?	1. How was the concept of time in this process for you?
	2. Is time speeding up or slowing down? Has time passed faster or slower than usual?
	3. Did everything seem to happen all at once; or had time stopped or lost all meaning.
	4. What do you think about the perception of the passage of time and the feeling of being disembodied?
What do you think about seeing light, scenes from the future, and seeing an unreal world?	1. How did you feel about seeing a bright light and being surrounded by it?
	2. What are your thoughts on seeing scenes from the future?
	3. How was your situation when you saw the moment of reunion with the family?
	4. What do you think about a different, non-earthly world? Your thoughts on a mystical and unreal world?
	5. During this process, you heard a mystical presence or an unidentified voice, how was your situation? How did you see a companion helping you?
	6. How was your situation of seeing your lost relatives during this process? What do you think about the people who interfere with you?
How was your life review and fear experience during this process?	1. How did you experience the thought of “returning” to life during this period? What do you think about the fear of not coming back to life? How did the transition between life and death make you feel? What do you think about the change in belief?
	2. What are your experiences in seeing and experiencing demonic creatures that threaten or disturb you, including extreme fear, panic and anger?
Do you have to experience death in order to be reborn? What do you think about it?	1. How did you view death and the afterlife? What do you think?
	2. What do you think about the personality change after this process?
	3. What do you think about empathy and doing good after this process?

References:(Dein, 2016; Greyson,1983; Greyson, 2001; Greyson,2006; Greyson, et al.,2012;Katz, et al.,2017;Kelly, 2001;Kellehear,1993).



In the researches within the scope of main characteristics during death experience, the most common elements were stated as disembodiment, tunnel, void, light, sacred beings or encountering with relatives that were passed away, sense of love, happiness and peace, accessing to supreme knowledge, voices that heard, life review, reluctance to return and being able to explain the experience or not (San Filippo 2006; Rousseau, 2012; Blanke, et al., 2016, Anghel and Munteanu et al. 2017). The subjects discussed in the study and the main characteristics during the death threshold experience in this semi-structured questionnaire are as follows:

Sense of disembodiment; it is the fact that patients watch the doctor's obituary from outside of the body with full consciousness and reality. Even if the person is not a doctor, sometimes patient watches its own dead body and intervention of others to this body. This phenomenon called as out-of-body experience (OBE) is one of the most important element of NDE (Near Death Experience) (Anghel and Munteanu et al. 2017). **The Light;** One of the most striking features of such experiences is that both experiencers and researches similarly use "light being" motive to describe Divine Being or Ultimate Being that experiencers defined base on their cultural and religious backgrounds (Uysal, 2018). **The Tunnel and Void;** People who experienced this state that they entered a dark tunnel within that period, and in some people's statement, the tunnel is depicted as a deep valley with bright light at its end (Çertuğ, 2010; Greyson, et al., 2009; Kundhart, 2006). **The Companion;** Whether it is a guardian angel, the most beloved one or the one the leading beings, they are all there to help the person who is going to die and to ease the difficulties. **The Positive Emotions;** People who experienced this mention a very intense sense of peace combined with an unconditional absolute love (Çertuğ, 2010; Greyson, et al., 2009; Kundhart, 2006). **Accessing to Supreme Knowledge;** According to James, noetic quality is state of insights about the depths of truth that not discovered by intelligence. These states are an inspiration and enlightenment that are important and meaningful (Raymond, 1999). **Sound;** There are some experiencers who hear the conversations between the doctors during the intervention in detail and narrate it literally after they revive. **Life Review;** most of those who experienced the threshold of death experience say that all their lives have flashed before their eyes. Moody describes the review of life as a colourful, three-dimensional, panoramic scanning of everything the experiencer does in her life. Time is not perceived as normal during the life review, it is a compressed time perception that is far from real sense of time (Khanna, and Greyson, 2014). **Reluctance to Return;** The reluctance to return had mentioned by many experiencers. In fact, most of those who are reluctant to return to the world are experienced by the ones that reached a certain stage of the process (Khanna and Greyson, 2014; Crystal 2008).

The Main Characteristics After Death Experience

The subjects discussed in the study and the main characteristics during the death threshold experience in this semi-structured questionnaire are as follows: **Change in Faith;** after the threshold of death experience, people stated that their lives undergo a dramatic change, they obtain a spiritual perspective about life and psychological differences such as reduced fear of death had occurred. **Empathy and Kindness;** when the threshold of death experience literature was examined, it was stated that many people are more tolerant, they love all living creatures by continuing the great love that they surrounded during the experience after the returned to their physical bodies, and they love people more. **Change in Personality;** it is found that the threshold of death experience causes the disruption self-esteem, and the absence of ego causes many personal changes. **Perception of Death and Posthumous;** it has been stated in many previous studies that there is a decrease in the fear of death and even in neurotic life anxieties (Kapaklıkaya, 2013; Parnia et al., 2014).

Data Collection Method

The interviews took place in the hospital's meeting room. Interviews were carried out when patients came for control at least one month after discharge. Each of interviews took about 20-30 minutes, and interviews were ended after continuing until there was no information left by both participants and researchers. In the interviews, codes (Code: K1, E1) were given to participants based on the principle of privacy, and sound recording was made.

Ethical Aspect of the Research

In this study, a research approval was obtained from Ethics Committee and hospital administration of a foundation university (Ethical approval no: 2019/02). The aim of the study was explained to the patients that participated in the research. After it was stated that participation is on a voluntary basis, the written and verbal consent of those who were willing to participate in the study was obtained.

Evaluation of Data

In the research, the data obtained at the end of the interviews were transferred from voice recorder to the computer. Content analysis that based on coding was used to analyse the data. In this analysis, the data that like each other were classified under certain concepts and themes, and it was interpreted by organizing clearly. The statements of the participants were coded independently by two researchers to increase the reliability and credibility of the data analysis. Each researcher that conducted data analysis created the code list, theme, and sub-questions independently, and afterwards, analyses were compared, differences were discussed, and the common codes were determined. Frequencies and percentages of individual information were



calculated and expressed. The data obtained was reported elaborately, and the validity of the research was provided by including direct quotations. The validity of the research was determined as 0,88 with the formula $[\text{Reliability} = \text{Consensus} / (\text{Consensus} + \text{Disagreement}) \times 100]$. In that case, the divergence was calculated as 0,12 (Baltacı, 2018).

Limitations of the study

The data obtained from the research was between March-May 2019. The study is limited to the opinions and comments of 12 participants who were hospitalized in the cardiology intensive care clinics of a private hospital, who were arrested in this process and returned to life with successful resuscitation, and who had at least one month passed after this process. Cannot be generalized to all resuscitated individuals

RESULTS

The findings of research were evaluated in three stages that will include individual information prior to the experience and the information about during and after experience.

Evaluation of individual information before the experience: According to findings that obtained from this research, it was determined that 75% of participants were male (n=9), 25% of them were female (n=3), average age was 63, 50% of them were university graduate (n=6), 25% of them high school (n=3), 25% of them were primary school graduate (n=3), 41,7% of them were deist, 50% of them religious, 8,3% of them atheist as religious affiliations and 75% of them considered it as a death experience. It was determined that all participants had married and chronic diseases, 83% of them were diagnosed with myocardial infarction due to coronary artery disease, 17% of them were diagnosed with cardiomyopathy and myocardial infarction due to cardiac valve disease. It was found that 7 participants that involved in this study did not have any information about NDE (the near- death experience) before, while five of them heard that information previously (Table 2).

Table 2: Distribution of Individual Characteristics of Participants (n=12)

Characteristics		Number	%
Age	The average age: 61 ± 13		
	<50	0	00
	50-59	8	67
	60 and over	4	33
Gender	Female	3	25
	Male	9	75
Educational Status	Illiterate	0	00
	Primary School	3	25
	High School	3	25
	University	6	50
Presence of Another Chronicle Disease	Have	12	100
	None	0	00
Presence of Religious Affiliation	Have	11	91,7
	None	1	8,3
Assessing This Situation As An Experience Of Death	Yes	9	75
	No	3	25
Religious Affiliation	Religious	6	50
	Deist	5	41,7
	Atheist	1	8,3
Medical Diagnosis	Coronary Artery Disease	10	84
	Valvular Heart Disease	1	3
	Cardiomyopathy	1	3
Total		12	100



The findings about death threshold experience of participants: In the research, many findings regarding during the experience were reached, and statements of the participants were directly quoted.

Sense of disembodiment: This feature is one of the common elements that emerged in the works of many researchers who had studied the threshold of death experience. It was determined that disembodiment, which take place in the group of paranormal elements in the literature, were seen in 3 of participants in this study.

(M2. 58 years old) *"Without seeing anything, as though I rose up quickly upwards". (F2. 57 years old)* *"I suddenly felt like I was in emptiness". (F1. 59 years old)* *"Suddenly I fell into a void with a sense of eternity, and my body was suspended there".*

it is the fact that patients watch the doctor's obituary from outside of the body with full consciousness and reality. Even if the person is not a doctor, sometimes patient watches its own dead body and intervention of others to this body. This phenomenon called as out-of-body experience (OBE) is one of the most important element of NDE (Moore and Greyson 2017).

The Tunnel and Void: In this study, the tunnel element was seen in 4 of the patients. Except for these participants, this element did not exist. From these statements as follows: **(F2. 57 years old)** *"I suddenly felt like I was in a void. I was definitely in a tunnel and seemed to descending fast", (F1. 59 years old)* *"I could not see anything around me, but I felt as if I was moving too fast, and it was like a sense of nothingness. It was as if I was going to another realm, it could be a tunnel", (F3. 62 years old)* *"There is a space like a tunnel where a light come from, and I was going up through this void", (M1, 58 years old)* *"I did not have such a feeling. I am never afraid of the death. Life is never-ending journey; death is an uncertain strike to this never-ending journey"*

Light: It was determined that 5 of the individuals that participated in the study experienced a different perception of space, and during this experience, they had said that they got out from a deep darkness to the light and they saw themselves in "a black space" or "a snow-white space". There were expressions from our participants that **(F3. 62 years old)** *"I never wanted to leave from this huge white void I was in. I have never experienced these emotions that I had in that moment" (M5 59 years old)* *"I felt myself ascending quickly out of a dark void" (M3 56 years old)* *"I was in a place where there were people that I don't know and everything inside was gleaming like illuminated" (M7 65 years old, F2 57 years old)* *"I was in a bright place. I was surrounded by a white cloud".*

Positive Emotions and Unconditional Love, Affection: One of the intense affectivity that experienced by the experienter during the NDE is the positive emotions and love. Four of the participants stated the element of love. There were statements that **(M7 65 years old, F2 57 years old)** *I was in indescribable sense of love, affection.*

"Everything was just perfect as it should be". I was not feeling the pain and ache (M1, 59 years old) *"The feeling of love that I felt took all my sorrow and misery. I felt so secure. I was peaceful. I felt so happy" (M1 58 years old)* *"I did not have such a feeling. I am never afraid of the death. We are all going to die. Life becomes more valuable as death becomes more individualize. Because life is too short to be wasted and spoil with the passions of the body, and it is the most valuable opportunity that given to me to perform the actions that will carry me to the eternity. My love for life is usually my longing in pursuit of eternity in which we will be rewarded afterwards".*

Sounds

11 of our participants stated that they fell into a silence and did not hear any sound. Only one participant stated that they did not have such a feeling.

Our **(M1, M2, M3, M6)** participants' expressions about intuition were not the same, but they were very similar to each other. They used expressions that gave the same feeling in meaning. These expressions are: *"I was in an environment where a great silence prevailed. I did not hear any sound. As if connection with everything gone down."*

Our **(F2, F3, M4, M5, M7, M8, M9)** participants' expressions about intuition were not the same, but they were very similar to each other. They used expressions that gave the same feeling in meaning. These expressions are: *"There was a peaceful, deep silence". (F1, 58 years old)* *"I did not have such a feeling. However, death is nothingness, and nothingness brings silence".*

Life Review: Individuals that experienced the threshold of death stated that their life flashed before her/his eyes during this experience. This feature, which is described as a panoramic image, was determined to be seen in 3 of the 12 people who participated in this study. **(F3, M4, M5)** *A luminous force surrounded me and showed me my life. Everything I has done so far flashes before my eyes so I could re-evaluate. Although it was unpleasant to see some parts of it, it was a great feeling to watch my life from start to finish. I saw what I could do and could not. From now on, I am going to fight for what I could not do.*

Not Want to Explain the Experience or Unable to Describe: In this study, 5 of the 12 participants that were interviewed reported that they experienced the situation that "not wanting to explain the experience or unable to describe". From our participants **(M6 64 years old)** *"Any worldly word is sufficient to describe such an experience" (M5 67 years old)* *"It is very difficult to describe the situation I lived in, it cannot be explained with words" (M7 65 years old, F2 57 years old)* *"I was in indescribable sense of love, affection. "Everything was just perfect as it should be". I was not feeling the pain and ache, these were the feelings that hard to describe" (M1 58 years old)* *"I do not know how I felt, so how can I describe? It is not a situation that can be explained.*

The Findings Regarding the After the Threshold of Death Experience

Change in Faith; Eight of the 12 participants in this research stated that there was a change in their lives after the experience, and they become more spiritual and motivated in practice; they were more convinced of the existence of a Creator that is not a human after the NDE. It was determined that they expressed as **(F1, F2, F3, F4, M5, M7, M8, M9)** *"Oh, it was not that such a thing. What I was looking for was in after death. Hell, and heaven concepts are still unknown to me, but I do not think that it is a place like they scared the people under the name of the hell. My existing values have become stronger"* **(M1, 58 years old)** *"I remember that moment as black as pitch and just dark"* **(M8 67 years old)** *"While I was looking around, the sound came from a hill, a distance by echoing. All it said to me was that it was up to me whether return to world or not. I chose to return to finish my work. Changes in my life? Now, I am more aware of people's feelings, beliefs and needs. I am more compassionate and respectful towards the others. Also, I rely more on the love of the God."*

Empathy and Kindness; In this research, there were 11 participants who stated that they experienced a change in this sense after the encounter with death threshold. Our (participants' expressions about intuition were not the same, but they were very similar to each other. They used expressions that gave the same feeling in meaning. These expressions are: **(E1, K3, E4, E5)** *"I started to empathize with people and their behaviours more. I'm telling people that death is not something bad and scary. I want to help people more. I am more compassionate and respectful towards others"* **(F1, F2, F3, M2, M7, M8, M9)** *"Now, I want to love all living things, less criticize people and be more forgiving."*

Change in Personality

In this study, it was found that 9 of the participants stated that their emotions increased after the experience, they feel the emotions that they did not know before they see this experience as a preview of post-mortem life or healing of a severe trauma in previous years, and they become more emotional. **(M8 67 years old)** *"I have become more introverted emotionally. I am thinking about death more. I realized that we would all be alone eventually and that nothing on world was permanent."* **(F1, F2, F3, M4, M5, M7, M8, M9)** *"It was as if the bonds that tied me to the world were cut. I no longer felt fear or my own body"*

Perception of Death and Posthumous; In this study, it was determined that fear of death was decreased in a significant part our participants. As the cause of the decrease in fear of death, it can be considered that patients develop new understanding of death in their minds with the experiences during this encounter and especially with the idea that another stage of existence has been passed. **(F1, F2, F3, M4, M5, M7, M8, M9)** *"Now, I think that I should hold on to life more tightly, another chance to live was given to*

me. This means a lot; I want to live with my loved ones and doing what I want. My faith about life has increased" **(M2, M6, M1, and M3)** *"I am not afraid to suffer, I am not afraid of death itself at all. My only fear can be this: I am afraid to fail"*.

DISCUSSION

In this research, "The Approaching the Death Threshold Experiences" which includes that souls of patients, who had cardiac arrest (CA) and cardiopulmonary resuscitation with clinical death experience, went to different realm after they left their physical bodies, they travel outside their bodies; they watch themselves or what is happening around them as an outside observer; they experience the elements of tunnel, emptiness, encountering with dead relatives etc.; they explain all their experiences after returning, was examined. Interviews were made with 12 people that were determined by purposive sampling using qualitative research method as 9 of them were male and 3 of them were female. It was determined that 41,7% of participants were deist, 50% of them religious, 8,3% of them were atheists as religious affiliations, and 75% of them considered it as death experience. It was determined that 7 participants in the research had no previous knowledge of the NDE, and 5 of them heard that information before.

When the research results were categorized according to Greyson classification and their death threshold experience was evaluated, they stated that 3 of them felt disembodiment, sense of pushing into a tunnel or void suddenly, positive emotions like love and affection; 5 of them experienced a different perception of space and during their experience they found themselves in "a snow-white emptiness" or "a black void" from deep darkness to the light; all of them entered into a silence and heard no sound. Moreover, 3 of 12 participants stated that their life flashed before their eyes; 5 of them were in a condition that unwilling to express this experience or unable to do it; 8 of them stated that there was a change in their lives after this experience and they become more spiritual in practice. When the literature is reviewed, it is stated that in people who return to life after successful cardiac arrest, regardless of age or culture, their threshold of death experiences are very similar; the souls of clinically dead people leave their physical bodies and go to different place or realm; they watched themselves or those around them from outside their bodies; they describe in detail the things that they watched while they are outside of their bodies even after returning to their bodies; they perceive phenomena such as intense love, peace, light and relatives that passed away (Habermas, 2018; Shermer, 2013; Van Lommel, 2010; Schlieter, 2018; Engmann, 2014; Choi, 2011; Grof, 2014).

In the literature, it was researched that the variables such as age, gender, education level, socioeconomic status, sexual preference/ orientation, spiritual beliefs, religious commitments, race, cultural environment, physical abilities etc. were not associated with the NDE. According to the results of the research, there is no certain conclusion about

whether the experience contributes to change of the psychological features that are owned (Haesler, 2013;Facco, 2012;Greyson, 2015).In the studies about whether having knowledge about this experiences before NDE by those who experienced this is the reason for this experience or not, it was determined that knowing about the NDE before the experience did not trigger the experience, any element of experience was not related with having the prior knowledge about NDE, many of those who experienced NDE have not had knowledge NDE before, beliefs before experience of those who have already had knowledge about NDE were not related to the current scope and structure of their NDEs. Moreover, in these studies parallel to this, it was stated that it has no relation with religion and religiousness, contrary to the claim that these experiences reflect imaginations based on religious doctrines (Rousseau, 2012;Blanke, et al., 2016;Anghel, 2017;Greyson,2009;Kundhart, 2006;Raymond,1999; Khanna and Greyson, 2014; Crystal,2008; Kapaklıkaya,2013;Parnia, Set al.,2014; Habermas, 2018; Shermer, 2013; Van Lommel, 2010;Schlieter,2018; Engmann,2014;Choi,2011; Grof,2014; Haesler,and Beauregard, 2013; Facco, and Agrillo, 2012; Greyson,2015).The qualitative nature of the data of this study did not allow such a comparison. Therefore, quantitative research is required.

CONCLUSION

To conclude, it contributes to adopt the idea, which life has a meaning, by connecting people to life more after the NDE. However, in some cases, change in the psychological and emotional state of individuals may be come into question. Healthcare professionals are the ones who accompany patients in the process of arrest and death, and ones that take in charge of this process. In order to meet to emotional and physical care needs of patients with this experience, there is a need for healthcare professionals who will have the necessary knowledge, skills and understanding and who can provide effective psychosocial support to patients and their families. Therefore, it is recommended that healthcare professionals are informed about this issue. Moreover, it is suggested that future studies in this field should be carried out on wider working groups, the scales to evaluated these studies should be developed, and the researches should be conducted to provide a clearer observation of changes that experienced by the ones who encountered with the threshold of death experience by understanding with all aspects of it. Thus, it is thought that it will contribute to individuals' adaptation and recovery process after the return to life.

Main Points

- i. Most of the people with cardiac arrest generally do not have a good quality of life, but also it was shown in many studies that there can be behavioural, cognitive and emotional disorders and posttraumatic stress disorder that starting right after the arrest.
 - ii. In addition, it has been determined that having near-death experiences also create long-term protective effects psychologically.
 - iii. In order to meet the emotional and physical care needs of patients with this experience, they must have the necessary knowledge, skills and understanding, and health professionals need to be able to provide effective psychosocial support to the patient and family.
 - iv. For this reason, this study will contribute to the literature in informing health professionals about this issue and raising awareness.
 - v. Thus, it is thought that after the return to life, individuals will contribute to their adaptation and recovery processes.
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Table 2: Distribution of Individual Characteristics of Participants (n=12)

Characteristics		Number	%
Age	Avg. Age: 61 ± 13		
	<50	0	00
	50-59	8	67
	60 and over	4	33
Gender	Female	3	25
	Male	9	75
Educational Status	Illiterate	0	00
	Primary School	3	25
	High School	3	25
	University	6	50
Presence of Another Chronicle Disease	Have	12	100
	None	0	00
Presence of Religious Affiliation	Have	11	91,7
	None	1	8,3
Assessing This Situation As An Experience Of Death	Yes	9	75
	No	3	25
Religious Affiliation	Religious	6	50
	Deist	5	41,7
	Atheist	1	8,3
Medical Diagnosis	Coronary Artery Disease	10	84
	Valvular Heart Disease	1	3
	Cardiomyopathy	1	3
Total		12	100