



An-Najah National University
Faculty of Graduate Studies

**LIVED EXPERIENCE OF PATIENTS WHO
UNDERWENT CORONARY ARTERY
BYPASS GRAFT SURGERY IN WEST
BANK – PALESTINE: HERMENEUTIC
PHENOMENOLOGY STUDY**

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**This Thesis is Submitted in Partial Fulfillment of the Requirements for the Degree of
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Dedication

I dedicate this work to:

My father, who has always encouraged me to chase my dreams. Without his support, I would not be where I am today. I hope to make you always proud of me.

My mother, for her unconditional love, support and help.

My loving wife and her family, for their assistance and words of motivation that kept me moving forward.

My son, Kareem, my hope, sunshine, and soul. I look forward to watching you grow up and achieve your own dreams.

My brother and sister for always being there whenever I needed them.

My uncle, Prof. Jihad, for his encouragement and desire to see me continue to reach more.

The cardiac surgeon Dr. Hasan AL Salman for his cooperation and support during the data collection.

My friends and colleagues Mohannad Al-'Arabi and Sameh Kanan for helping me to find participants for my research.

Thank you all

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Thank you all for helping me complete this work.

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

LIVED EXPERIENCE OF PATIENTS WHO UNDERWENT CORONARY ARTERY BYPASS GRAFT SURGERY IN WEST BANK – PALESTINE: HERMENEUTIC PHENOMENOLOGY STUDY

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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Date:

19.2.2022

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Abstract

Introduction: Coronary Artery Bypass Graft (CABG) surgeries are now very common for the treatment of Ischemic Heart Disease (IHD). In fact, IHD is a common and serious disease that affects people all around the world. Furthermore, if not handled properly and promptly, it can have fatal consequences. The main objective of the study is to investigate the lived experiences of IHD patients who had CABG surgery in Palestine.

Methods: Qualitative hermeneutic phenomenology design was used to conduct this study, as it describes and interprets the participants' experience more deeply. The data was collected through interviewing 21 participants and by using Paule Ricours 1976 for analysis.

Results: The results of this study revealed that the patients had various reactions to the surgery, including fear, surprise, hesitation, and adaptation. In addition, they suffered from restrictions on their daily life activities due to the surgery. Moreover, Corona virus affected the patients' lives; as they were afraid of getting infected. The patients also went through physical and psychological changes and many complications related to CABG like plural effusion and cardiac arrest. The operation had some financial effects on the patients' lives. Finally, the results identified the support groups for CABG patients and the participants' perspectives regarding the healthcare system.

Conclusion: the findings revealed that CABG patients experienced physical, psychological and financial changes. They also had restrictions on their lives and developed many complications related to the surgery. Thus, they need support from the

government, the community and healthcare providers to meet their needs and improve their quality of life.

Keywords: Ischemic Heart Disease, Coronary Artery, Bypass graft surgery, Experience, Hermeneutic.

Chapter One

Introduction and Literature Review

1.1 Introduction

Ischemic heart disease (IHD) is a common and serious disease that affects people all over the world. If it is not handled properly and promptly, it can have fatal consequences (Schwartz, 2012). In fact, 17.9 million people died each year as a result of a chronic heart disease (CHD), with the figure expected to rise to 23 million by 2030 according to World Health Organization (WHO, 2019). Based on WHO statistics, more than 17 million people died due to CHD in 2015 (WHO, 2017). This finding demonstrates that the number is rising. Death rates from coronary vascular diseases (CVDs) were up to 42%, 38%, 32% and 23%, respectively, in Saudi Arabia, the United Arab Emirates, Bahrain and Qatar (WHO, 2017).

Generally, non-communicable diseases (NCDs) are the leading cause of death in the Palestinian community, accounting for up to 50% of all deaths (WHO, 2017). The incidence is higher in the West Bank (57%) than in Gaza (40%) (Shahwan et al., 2019).

In 2014, CVD was reported as the first cause of deaths in Palestine accounting for 29.5% of all deaths (WHO, 2017). The number is rising according to WHO statistics 2017. The estimated rate of deaths caused by CAD or IHD amounted to 31% (WHO, 2017).

Mainly, IHD causes the following symptoms: severe chest pain, also known as angina, shortness of breath, fatigue, and serious physical conditions that affect one's ability to perform daily activities. Consequently, many interventions, such as medications or, in severe cases, invasive operations, should be made to relieve the symptoms and treat the heart. If IHD is not managed and treated immediately, CABG surgery becomes inevitable (Peterson et al., 2004).

Invasive procedures combined with medical treatment to cure IHD are superior to medical treatment alone. Hence, the use of cardiac catheterization and surgical intervention such as CABG for revascularization in severe ischemia yield better results (Maron, 2020).

CABG is a surgical procedure used to treat ischemic heart muscle that is affected by a blocked coronary artery by re-perfusing that area with blood via a vascular graft that bypasses and connects that area with blood (Birim, Bogers, & Kappetein, 2012). It treats the heart by re-perfusing the cardiac muscle, making it one of the most effective interventions for relieving IHD symptoms (Schwartz, 2012).

Incontrovertibly, the surgical intervention is needed in complex cases to keep the heart pumping and save the patient's life CABG improves the quality of life, increases life expectancy, and alleviates IHD symptoms such as angina (Tsay, 2013). On the other hand, it affects the mental, psychological, social and emotional aspects of the patients' lives after the operation; considering some patients developed nervousness, anxiety and isolation post the operation (Lingehall, 2013).

During the first three months post the surgery, it is common that some patients develop physical and psychological signs and symptoms such as pain in the surgical site, fluid retention, fatigue short term cognitive impairment, nervousness, depressed feelings, lack of control, and dependency (Bergvik, Sørli, & Wynn, 2010).

After the researcher reviewed the available literature regarding the lived experience of CABG patients, he found that there is a lack of researches regarding their experience, especially in Palestine. Thus, it is important to deeply investigate the lived experience of IHD patients after CABG surgery.

Understanding their experience, will help healthcare providers meet their needs. As a result, they will provide better services to those patients. They will also assist their families and support groups care for them to meet their specific needs.

1.2 Background

1.2.1 Historical background

CABG is listed as the most common cardiac surgery performed in the world today. In the United States, they perform approximately 200,000 cases per year (Weiss, Elixhauser, 2006).

It has a history that dates back more than a century. It started in 1910 with Alexis Carrel's idea about coronary circulation and the ability to make a surgical intervention.

The first successful application was made on dogs with intrathoracic aortic and cardiac anastomosis (Carrel, 1910).

Then in 1935, doctors began testing on humans in order to relieve chest pain in CAD patients. Claude Beck, who's a doctor, was able to improve perfusion to the heart muscle (myocardium) in CAD patients by inserting muscle pedicles, omentum, and pericardial fats into the pericardium (Beck et al., 1958).

In 1946, the concept of CABG improved when "Vineberg procedure" was first applied by Arthur Vineberg. He implanted a Left Internal Thoracic Artery (LITA) in the left ventricle frontal wall to increase the blood supply to the left ventricle (Vineberg, Miller, 1951). Then, Robert Getz performed the first successful CABG surgery in 1960, in New York. He used Rosenak (tantalum) rings to anastomose the Right Internal Thoracic Artery (RITA) to the Right Coronary Artery (RCA) (Goetz et al., 1961).

Then, in 1962, David Sabiston firstly used Saphenous Vein Graft (SVG) for anastomosis. He used the off-pump technique to anastomose SVG to RCA (Sabiston, William & Rienhoff, 1974).

Afterwards, the first usage of LITA to Left Anterior Descending coronary artery (LAD) anastomosis manner was applied by Dr George Green in 1968. It is now regarded as a standard procedure for modern CABG surgery (Green, Stertz & Reppert, 1968).

In essence, the first CABG surgery in Palestine was performed in Ramallah, West Bank, in 1999, and it was successful (Salameh et al., 2013).

1.2.2 Coronary artery disease

1.2.2.1 Pathophysiology

Coronary artery disease means narrowing of the coronary arteries (arteries that supply blood to the heart). This narrowing takes place due to an accumulation of plaque (deposits of cholesterol, other fats, and calcium) in the artery walls. This mechanism is known as atherosclerosis, which means (a hardening in the arteries) (Parmet, Glass, 2004). If the plaque softens and breaks down, it immediately forms a blood clot, which can cause a blockage in the coronary arteries and reduce blood flow to the cardiac muscle. This can result in a myocardial infarction (death of the cardiac muscles supplied by the blocked artery), also known as a heart attack (Parmet et al., 2004).

1.2.2.2 Risk factors

Many factors play a significant role in developing coronary artery disease such as physical and psychological risk factors.

These risk factors include an increase in the concentration of low-density lipoprotein (LDL) in the blood and a decrease in the concentration of high-density lipoprotein (HDL) in the blood. In addition, they include a rise in triglyceride levels in the blood, Diabetes Mellitus (DM), hypertension, and smoking (Foody, et al., 2013).

Besides the physical risk factors, anxiety plays a significant role in the development of CAD. In other words, psychological disorders such as major depression and anxiety disorders can also lead to CAD (Sheps, Sheffield, 2001).

In order to relieve the symptoms and treat the heart, many interventions must be performed, such as using medications or, in severe cases, invasive procedures. Therefore, if IHD is not managed and treated immediately, CABG surgery becomes inevitable (Peterson et al., 2004).

1.2.2.3 Epidemiology

According to the American heart association statistics, the rate of CAD deaths in the United States in 2016 was 236.6/100000 males and 117.5/100000 females between the ages of 35 and 74 (WHO, 2019).

In fact, 17.9 million people died each year from CHD, with the figure expected to rise to 23 million by 2030 (WHO, 2019). According to WHO statistics, over 17 million people died from CHD in 2015 (WHO, 2017). Moreover, in 2009, the age-adjusted rate of CHD deaths was 116.1 per 100,000 population. CHD was listed as the primary underlying cause of death in 386,324 people in the United States (Gillespie, 2013). The rates of Coronary Vascular Diseases (CVDs) deaths were up to 42%, 38%, 32% and 23% in Saudi Arabia, the United Arab Emirates, Bahrain and Qatar, respectively (WHO, 2017).

Non-communicable diseases (NCDs) are the leading causes of death in the Palestinian community, accounting for up to 50% of all deaths (WHO, 2017). The incidence is remarkably higher in the West Bank (57%) than in the Gaza Strip (40%) (Shahwan, et al., 2019).

CVD was reported as the leading cause of death in Palestine in 2014, accounting for 29.5% of all deaths (WHO, 2017), and it is increasing. According to WHO statistics 2017, the estimated rate of deaths related to CAD or IHD was found to be 31% (WHO, 2017). Statistically, cardio vascular disease was considered the leading cause of death in 2011 in Palestine representing 22.4% of all deaths that year (WHO, 2017).

1.2.3 Coronary Artery Bypass Graft Surgery (CABG)

In progressive coronary artery disease cases, CABG surgery is a surgical intervention used to return the blood flow in the infarcted area in the heart by revascularizing that area.

This surgery is considered cost-effective and is used for the long-term treatment of CAD. Generally, it improves the quality of life for those patients (Birim et al., 2012).

During the first three months following CABG surgery, the patient is likely to experience physical and psychological symptoms such as pain at the surgery site, fluid retention, general weakness, shortness of breath, heart rhythm abnormalities, short-term cognitive impairment, depressed feelings, nervousness, lack of control, and dependency (Bergvik, Srlie& Wynn, 2012).

After CABG, approximately 16–38 percent of patients experience depressive symptoms, and approximately 31–46 percent of patients experience anxiety. Besides, Posttraumatic Stress Disorder (PTSD) may develop in 3–18% of patients (Tully & Baker, 2012). In fact, some patients may suffer from mental illnesses, which can have a negative impact on their health and lead to a bad prognosis (Waight, et al., 2015). Depression, for example, will slow the wound healing process, cause cardiac symptoms, and lengthen hospital stays and hospital visits (Tully & Baker, 2012). Hence, it is obvious that stress is common among most IHD patients, particularly after surgery, due to the patient's condition and the hospitalization itself.

Many studies investigated the physical and mental stressors associated with CABG surgery and its consequences. For example, a study conducted in 2017 focused on the stressors associated with CABG surgery. Given the seriousness of the surgery and the nature of life after it, this study found that most patients experienced some stressors associated with CABG surgery waiting. These patients were aware that they may

experience insomnia, sleep difficulties, loss of appetite, and concentration difficulties following the surgery. They were also concerned about the consequences of the surgery, such as pain and a distorted body image (Morowatisharifabad et al., 2017).

Nooreddine Mohammadi, on the other hand, conducted a study that focused on the positive outcomes of this surgery. His research provided hope to IHD patients awaiting surgery. He explained that the surgery improves IHD patients' quality of life by reserving more attention and support from family members. The surgery gave the participants hope for the future and increased their spiritual well-being and faith in God (Mohammadi, et al, 2015).

1.3 Problem statement

Phenomenological research focuses on describing the lived experience of individuals who face a specific phenomenon of interest to capture their lived experience. In other words, it entails comprehending the impact of a particular experience within the context of people's lives (Hirst, 2010).

The Palestinian Ministry of Health (MOH) is working to strengthen the health system. It has developed a strategic plan for the management of cardiovascular disease and prioritized CVD patients in the West Bank and Gaza (Shahwan et al., 2019). However, no published studies on patients from the West Bank have been published, as the available research on the coronary care system is based on data from East-Jerusalem Arab and Jewish citizens (Salameh et al., 2013).

The researcher chose to study this phenomenon due to the lack of specific studies related to the lived experience of patients after CABG in Palestine.

As mentioned above, phenomenology is a suitable method for conducting this type of study. While many researchers used to conduct it in a descriptive manner, the researcher chose to use a more advanced method to conduct and interpret the phenomenon by using hermeneutic phenomenology.

1.4 Aim of the study

The main aim of the study is to explore the lived experience of ischemic heart disease patients who underwent CABG surgery in Palestine.

1.5 Significance and implications of the study

Provided the literature review and previous studies on the lived experience of patients after CABG, there is a lack of knowledge and experience about those patients' lived experiences and coping strategies, particularly in Palestine. The contribution of this study is that it will add to the literature a new experience of Palestinian patients following CABG. Hermeneutic design is used to elicit a more profound experience. Healthcare providers can benefit from this research by better understanding the difficulties that IHD patients face following CABG. This will aid in the improvement of care quality and the healthcare system in Palestine by adding new hospital policies that emphasize on providing special care to cardiac patients post CABG. Accordingly, the patients' quality of life following CABG will improve. That is, the goal of this research is to achieve good health and well-being, which is one of the United Nations' sustainable development goals (UNSDG).

1.6 Interview guide

1. What was your first reaction when you heard that you should undergo coronary artery bypass graft surgery, and how did you cope with the news?
2. How did the surgery affect your life? Explain.
3. Who is supporting you psychologically and physically post the surgery?
4. How did the health care system focus on your care and healing as a cardiac patient?
5. Please explain any suggestions you have to improve the health care system regarding cardiac patients.

1.7 Literature review

In this chapter, the researcher presents the literature related to the lived experience of CABG patients.

Before undergoing CABG, patients may experience a variety of issues. A study conducted in Canada revealed how patients face psychological problems while still on the waiting list. These psychological problems include, but aren't limited to stress, which leads to angina and, in some cases, deterioration in their health condition (McCormick et al., 2006). That is, their journey with CABG begins here. Following an

angiography, the doctor realizes that the surgical intervention (CABG) is required, and he should advise the patient to make this decision and proceed with the surgery (Fonseca et al., 2018). Patients generally must wait between a week and several months for the surgery to be performed. Meanwhile, they experience a variety of reactions and feelings toward the surgery, including anxiety and fear of the procedure (Kathania et al., 2021). Some patients also get unsure and frustrated about CABG, while others get shocked, especially when the doctor informs them that the surgery is critical to their survival (Feuchtinger et al., 2014). Eventually, most patients accept the surgery after receiving special support from their families and healthcare providers who explain the significance of the surgery.

However, some patients hesitate to undergo CABG and prefer to receive medical treatment or PCI. Hyun conducted a study in 2020 comparing the survival effect of either performing CABG or using PCI alone for 5 years in patients with left main CAD. They carried out a study on patients who went through CABG surgery and others who used drug-eluted stent alone for 5 years. They found that CABG surgery relieves angina pectoris and improves the patients' quality of life. In other words, the results showed that CABG had a significant mortality risk reduction in the first five years when compared to medical treatment alone (Hyun et al., 2020). Nevertheless, the difficulties the patients face do not end once they decide to have the surgery. For instance, studies have shown that patients experience physical and psychological effects following CABG. Pourghane and others explained that CAD is a very dangerous and serious disease that, if not treated properly, can lead to death. Furthermore, they stated that the most effective treatment for IHD is CABG surgery. They conducted a study to explore the lived experience of patients who underwent CABG by using a qualitative design to analyze the experience of 18 patients post operation. The results demonstrated that most patients experienced fear from the recurrence of a heart attack, performing daily life activities, and travelling.. The study also showed that the participants were tired of living within the confines of the therapeutic framework. They found it difficult to take many drugs and follow a specific diet. They were torn between accepting or rejecting the treatment (Pourghane et al., 2014).

It can be said that CABG patients face numerous challenges. In addition to the aforementioned difficulties, Sun found that disability is the most common complication for CABG patients one year after the operation. Disability is defined as the significance of variations in physical and mental functioning for human performance and well-being (Wasserman, 2017). It occurs frequently for both men and women, and women are more affected than men. The risk of disability rises with Heart Failure (HF) (Sun et al., 2018).

The difficulties are not only physical, but also financial. Vila used an ethnographic interpretative approach to evaluate the experience of patients with ischemic heart disease, especially the meaning of their condition during the rehabilitation period post CABG surgery. He used in depth interviews with 11 participants to elicit the meaning of their experience. The main result was the commonness of financial difficulties among the patients due to drug costs, transportation costs to reach the healthcare center and the surgery itself (Vila, 2018).

With all these challenges and in order to relieve themselves from the negative feelings and consequences, some patients pay more attention to the spiritual aspect. Heravi-Karimooi, Rejeh, & Abbasi focused on spirituality after coronary artery bypass grafting, as they determined the experience of CABG patients from the spiritual aspect. They interviewed 11 CABG patients using qualitative hermeneutic phenomenology. From the theme and sub themes, the researchers found that most of those patients tended to be closer to God. They focused on using spirituality and faith to be stronger to face the world and accept their new condition in an optimistic way (Heravi-Karimooi, Rejeh, & Abbasi, 2017).

On top of the patients' needs, care plans must be given adequate attention to reduce the negative consequences of the surgery, especially among the elderly. Sheridan et al. conducted a study among elderly patients who are undergoing CABG and found that they may experience ups and downs in their health condition. Therefore, achieving calmness is the goal of their care plan (Sheridan et al., 2010).

In the same vein, Karen Theobald and Anne McMurray investigated the needs of patients after CABG for their family and healthcare providers, mainly after discharge. They interviewed a sample of 30 patients and found that half of them considered the open-heart surgery a huge personal shock. They found returning to the normal life very

difficult and experienced pain. The researchers stated that there is a need for post-operative physical adjustment. In addition, the study found that the surgery affected some of the patients financially and there was a need for adjustments on the lifestyle from their family or healthcare providers. Hence, the researchers concluded that there is a need to improve the quality of discharge planning from the healthcare providers or the family after discharge (Theobald & McMurray, 2004).

More precisely, in the first year after discharge, healthcare providers and family members should take responsibility for improving the CABG patient's quality of life. Phillips-Bute demonstrated that there is a link between post-operative cognitive decline and decreased quality of life in CABG patients in the first year. In other words, by focusing on post-operative cognitive improvement, we can improve the quality of life for CABG patients (Phillips-Bute et al., 2006).

Interestingly, Palestinian hospitals are working hard to provide the highest quality of care to their patients. Salameh compared post-CABG outcomes between the Palestinian Ministry of Health, specifically Ramallah Hospital, and Ghent University Hospital in Belgium between 2009 and 2011. The findings revealed that there are similarities in the success rate and patient satisfaction after surgery between the European and Arab groups, with slightly significant differences. The mortality and readmission rates among Palestinian patients were higher than in the Belgium group due to infections, primarily respiratory infections related to diabetes and smoking, which were more prevalent among Palestinian patients than in Europe (Salameh et al., 2013).

From the same perspective, Hulzebos highlights that Post-operative Pulmonary Complications (PPC) are the leading cause of morbidity, mortality, and length of stay in the hospital following the operation. Therefore, reducing the respiratory effects of CABG, he suggests that patients should engage in inspiratory muscle training and use a spirometer to reduce PPC (Hulzebos et al., 2006). Thus, the health of the pulmonary system is essential to the success of the CABG surgery. However, corona virus (COVID-19) is currently regarded as the disease of the century. Undoubtedly, COVID - 19 pandemic is a major public health crisis globally. It has put a hard challenge on the international healthcare system and its resources (Gates, 2020). Some researchers conducted studies to determine the effect of COVID- 19 on the CABG patients. In his study, Salenger explained the outcome of COVID-19 patients post cardiac operations

across North America. The research showed that COVID-19 had serious consequences on CABG patients. Among COVID-19 infected patients who underwent CABG, 8% died as a result of COVID-19 complications after the surgery, and 1% developed cardiorespiratory failure and needed special respiratory management, so they were placed on Extracorporeal Membrane Oxygenation (ECMO), and 18% of those who were placed on ECMO died while the rest still depend on ECMO since the time of the surgery. The researchers pointed out that the current trend in North America is to decline the volume of cardiac surgeries on COVID-19 infected cases to 45% of baseline. This trend aims to reduce the cardiopulmonary complications associated with COVID-19 post cardiac surgeries (Salenger et al., 2020).

Shifting gears to the Arab world, there have been few studies in some Arab countries that have focused on some aspects of the experience of patients who have had CABG or are waiting for the surgery. For example, a study conducted in Saudi Arabia in 2019 examined the psychological status of patients awaiting CABG. The findings revealed that the majority of patients suffered from anxiety. The level of anxiety was higher in patients with low incomes or who belonged to a lower social class (Ali et al., 2019).

Their fear can be justified by the high cost of CABG. This finding was demonstrated in a study conducted in Iraq which found that CABG is a very expensive surgery for both the government and the patients in public hospitals. The costs of the surgery are higher for patients undergoing complicated procedures, as well as those suffering from diabetes or cancer (Pangano et al., 2020).

Another study conducted in Saudi Arabia in 2021, highlighted the psychological and physical rehabilitation post-CABG. The results showed that home based cardiac rehabilitation is more effective than outpatient based cardiac rehabilitation after the end of the hospital intervention. This can be related to the presence of support systems such as family members and the comfortable environment which patients feel at home (Takroni et al., 2021).

Lastly, there are many challenges that the patients experience through their CABG journey according to the literature. Unfortunately, these challenges are not being addressed in the Palestinian community. Therefore, this study will provide significant data for the literature by focusing on the special experience of patients who underwent CABG in Palestine.

Chapter Two

Methods

2.1 Design

In this study, a qualitative hermeneutic phenomenology design was used. This design is appropriate for this study because it deeply describes and interprets the lived experience of people who have undergone CABG surgery.

According to literature, phenomenological research is a type of qualitative research that investigates the experiences of those who have experienced a specific phenomenon (Creswell, 2007). It seeks to describe a human's lived experience in relation to time, space, and relationships (Finlay, 2009). As for the tool used in this study, individual participant interviews were conducted to achieve an understanding of each participant's world and experience. Phenomenological studies are classified into two types: descriptive and interpretive.

2.1.1 Descriptive phenomenological research

This design is developed by Husserl. Its central question is “What do we know as people?” It is used to describe the lived experience of humans as it is “understood and described from the perspective of those who have lived experiences and can describe them” (Polit & Beck, 2014). Husserl believed that in order to obtain the phenomena correctly, the researcher should separate his own experience and feelings from the method, a practice known as bracketing (Lewis, 2010).

The four steps of descriptive phenomenology are bracketing, intuiting, analysis, and description (Polit & Beck, 2014). Intuiting means that the researcher “remains open to the sentences attributed to the phenomenon of those who have experienced it” (Polit & Beck, 2014). By employing this method, the researcher attempts to approach the phenomenon in a healthy, although somewhat naïve, manner (Finlay, 2009).

In the analysis step, the researcher must focus on identifying and extracting important statements and reflections from the interviewees, categorizing and evaluating them according to their contribution to understanding of the studied phenomenon. In the final step, scientists simply describe their findings based on the data analysis.

Husserl's student, Heidegger, believed that researchers could not fully establish their own experience, preconceptions, and theoretical gradients. As a result, he rejected bracketing. Instead, he asserts that interpretation must be carried out in order to obtain accurate interpretative research.

Historically, individuals used their background, which was formed by what they perceived from their culture since birth, to understand the world. Through this understanding, people determine what is “real” (Lavery, 2003). Consequently, Heidegger believes that an individual's background is essential to correctly obtain hermeneutic (interpretative) phenomena. To put it another way, understanding the phenomenon requires taking into account the individual's own lived experience. The goal of Heidegger is to let “the things of the world speak for themselves” (Manen, 1990).

2.1.2 Interpretive phenomenology

Interpretative phenomenology was developed by Heidegger and Gadamer's philosophies and aims to understand the importance of being in the world (Smythe, 2008). The primary question in this type of research is “What is it?” (Polit & Beck, 2014). From this question, the concept of interpretation is freedom. “Located freedom means that individuals are free to make choices, but their freedom is not absolute; it is limited by the specific conditions of their daily lives (Lopez, 2004). The concept of liberated freedom leads the researcher to “focus on describing the meaning of the individual's existence in the world and how these meanings affect the choices they make” (Lopez, 2004).

Another concept of Heidegger is that the researcher's knowledge contributes to the co-constitutionality. Co-constitutionality means that the meaning developed by the researcher in the interpretative research is a “mixture of meanings formulated by both participants and researchers within the focus of the study” (Lopez, 2004).

2.1.3 Hermeneutical phenomenology

Hermeneutical phenomenology focuses on both the interpretation and description of the lived experience. “It is a descriptive (phenomenological) methodology because it pays attention to how things work, but it is also an interpretive (hermeneutic) methodology because it argues that there are no such things as uninterpreted phenomena” (Manen, 1990).

The interpretation is based on working in a circle. This means that the researcher should move from parts to the whole and front to back in the experience in order to increase the depth of the lived experience (Lavery, 2003).

In aims to gain a thorough understanding of the phenomenon, the process should be repeated several times. The text should be read and reread to elicit themes and subthemes. Then, it should be examined and re-examined to identify any patterns that may emerge. The researcher should repeat this process of analysis until no new themes emerge; this is known as saturation (Lavery, 2003).

Following the previous steps, interpretation will be completed by reviewing the text several times with additional exploration and clarification of themes that emerge.

Accordingly, hermeneutic phenomenology is the best method for accurately obtaining the lived experience of CABG patients. Given the seriousness of CABG operation, using the hermeneutic method is the best way to elicit the lived experience at all stages because it addresses all the aspects of the lived experience (Lavery, 2003).

2.2 Population and sampling method

2.2.1 Population

The population of the study is all accessible patients in Palestine – West Bank with IHD who underwent CABG in the assigned hospitals.

2.2.2 Sample and sampling

Nonprobability purposive sample was taken for this study from the entire population to conduct the study in depth until saturation.

The researcher took 21 participants to ensure the sample saturation. Saturation in qualitative research refers to the point at which each participant repeats the ideas of others without adding any new information to the subject (Guest, Bunce & Johnson, 2006).

As for the sample size, Guest, Bunce and Johnson (2006) suggest that conducting six to twelve interviews with the target population is adequate to achieve saturation (Guest, Bunce, & Johnson, 2006).

2.2.2.3 Inclusion criteria

- Patients who are adults: more than 18 years;
- Patients who are conscious, oriented, can speak, mentally intact, and clinically well;
- Patients who had the operation for over 1 month, because one month is enough for the participant to create a full experience about his condition in a holistic manner and will be able to share his experience with others.

2.2.2.4 Exclusion criteria

- Patients who are still in the ICU, mentally ill, or in severe pain.
- Patients out of the West Bank like Gaza.
- Patients who performed the operation for less than 1 month.

2.2.2.5 Sample distribution

The researcher conducted the interviews with a nonprobability purposive sample of 21 participants. The table below shows the distribution of the sample according to gender, age, religion, marital status, place of the surgery, time of the surgery, medical history, number of children and occupation.

Table 1*Demographic Characteristics of the participants*

Variable		Number	Percentage
Age	< 40	1	4.8
	40 – 60	7	52.3
	>60	13	42.9
Gender	Male	20	95.2
	Female	1	4.8
Religion	Muslim	21	100
	Christian	0	0
Education	Literal	2	9.5
	School	13	61.9
	University	6	28.6
Occupation	Working	18	85.7
	Not working	3	14.3
Marital status	Single	0	0
	Married	21	100
Number of children	0	2	9.5
	1-4	3	14.3
	>4	16	76.2
Date of the surgery	Less than 2 months	3	14.3
	2 to 3 months	9	61.9
	More than 3 months	9	23.8
Place of surgery	Ar-Razi Hospital	13	66.7
	An-Najah National University Hospital	1	4.8
	Specialized Arab Hospital	2	9.5
	Palestine Medical Complex	5	19
Medical history	Diabetes	5	23.8
	Hypertension	1	4.8
	Diabetes and hypertension	2	9.5
	None	13	61.9

As presented in the table above, the sample consists of 20 males and 1 female. This means that males made up 95.2 percent of the sample and females made up 4.8 percent.

As for the age, the table shows that the participants under the age of 40 composed 4.8 percent of the total sample, while those between the ages of 40 and 60 composed 52.4 percent, and those over 60 composed 42.9 percent.

In terms of education, the majority of participants (61.9 percent of the total sample) had a high school diploma (Tawjehi). However, 28.6 percent of those interviewed had a university degree, while 9.5 percent were illiterate.

Regarding the occupation before the surgery ,18 participants were employed while 3 were unemployed. With regard to the surgery itself, the collected demographic data focused on the time and place of the surgery. As the table presents, 9.5% of the

participants had undergone the CABG surgery at Specialized Arab Hospital, whereas 19% of them had it at Palestine Medical Complex (PMC). Moreover, 4.8 % of them had it at An-Najah Hospital while the majority 66.7% of them had it at Ar-Razi Hospital.

Moving on to the time of surgery, 61.9% of the participants underwent the surgery within 2 to 3 months before the start date of the study. 14.3% of them underwent it in less than 2 months before the time of the study, and 23.8% underwent it before more than 3 months of the study date.

Concerning the medical history, the table presents that 61.9% of the participants had no medical history. However, 23.8% of them have diabetes, 4.8% of them have hypertension and 9.5% of them have both diabetes and hypertension.

In terms of the number of children, 9.5 percent of the participants have no children, 76.2 percent have more than four children, and 14.3 percent have one to four children. As for the occupation, the table shows that 14.3% of the participants are unemployed while 85.7 % of them are working. Finally, the table presents that all of the participants were Muslims and married.

2.3 Site and setting

The study was conducted in hospitals that perform CABG surgery in the West Bank, Palestine. Particularly, it included An-Najah National University Hospital, Specialized Arab Hospital, PMC and Ar-Razi hospital. All of these hospitals are referral centers doing thoracic surgeries.

2.4 Data collection procedure

Agreements from the Institutional Review Board (IRB) of An-Najah National University and the Palestinian Ministry of Health were taken. Then, the phone numbers of the accessible participants based on the inclusion and exclusion criteria were obtained from the assigned hospitals after taking the permission from the institutions. Data was collected from January 2021 to April 2021. The researcher contacted the available participants who met the inclusion criteria to take their permission to be interviewed. All the interviews were conducted by the researcher. At the time of each participant's interview, the purpose, significance and nature of the current study were explained. Then, a consent form was signed by the participants. The total number of the

participants was 21: ten of them were interviewed face to face in separate places like a private room in the hospital after clinical visits, and eleven patients were interviewed over the phone due to corona virus pandemic that prevented reaching them. All the interviews were conducted by the researcher in the mother tongue (Arabic) and using the slang language to allow the participants to speak freely and express themselves. The duration for each interview ranged between 45 – 60 minutes until all the interview questions were covered. The participants were encouraged to explain their answers and express themselves freely in their own words by using an interview guide which consists of a series of open ended questions that allow the researcher to investigate different areas in their experience. Of course, the interview guide was handed to three qualitative researchers to review its content validity and their feedback was taken into consideration. Moreover, during the interviews, probe questions were used by the research to clarify or seek elaboration of the participants' answers. In addition, field notes were immediately taken by the researcher after each interview including tone of voice, facial expressions movement and physical status and they were added to the transcriptions. The prospect of follow up interview, if necessary to explain the answers, was discussed with the participants at the end of the interview. The interviews were recorded using two high quality phone recorders to guarantee a comprehensive, precise and true reflective descriptions of the participants' experience. Then, the data was transcribed verbatim. Then, the data was coded and themes and sub themes were elicited using the hermeneutic phenomenological design.

2.4.1 Tool

The study was conducted using interviews with the selected participants in the aforementioned hospitals. An interview guide was used to control the interview and recorders to record the data as an audio form before being transcribed on paper.

2.4.2 Analysis

The hermeneutic method, also known as the interpretation method, was used to analyze the data. In fact, it is appropriate for analyzing this research in order to gain a thorough understanding of the text. According to Paule Ricours, the hermeneutic method is best used for achieving a complete understanding of texts. He also claims that this method is divided into three levels: naïve reading, structural analysis and critical interpretation and discussion (Ricoeur, 1976, 1984). Naïve reading refers to reading the text to achieve an

initial understanding and elicit the general meaning. This is an important step in developing the data analysis (Pedersen, 2005). Thus, transcripts were read several times during this step to achieve a first understanding of all the transcripts before transforming the meaning from natural language to phenomenological language for scientific research. Then, in structural analysis, the primary researcher should write what is said/observed by the participants in another language “unit of meaning”, then, convert their speech to “units of significance”. This way, the researcher elicits subthemes and main themes from the data (Ricoeur, 1970). In this research, the researcher carried out this level of analysis by starting with what was said or observed by the participants about their lived experience post CABG surgery. Undoubtedly, body language, the tone of voice and facial expression were included too.

As data analysis progresses to the final level, the researcher moves from the individual to the universal level by emphasizing “what the text is about,” which can be accomplished by connecting the finding with other theories and studies (Pedersen, 2005). Applying this measure, the researcher achieved a comprehensive understanding of the lived experience of ischemic heart disease patients after CABG surgery in their real lives.

2.5 Ethical consideration

Because this study is concerned with human medical issues, the researcher followed a procedure that protects human subjects. The procedure is approved by An-Najah National University’s Research Ethics Boards.

As previously stated, CABG is a very sensitive and serious issue in Palestine. As a result, before beginning data collection, the researcher obtained permission from the Ministry of Health. The participants also expressed their desire to be included in the study and signed a consent form after receiving verbal and written information about the study and its purpose.

Some interviews were conducted face-to-face in a private room, while others were conducted over the phone at a convenient time. The interviews were recorded and all the information were kept strictly confidential.

2.5.1 Establishing Rigor

To ensure rigor of data analysis, the transcripts were handed to three qualitative research experts who read the transcripts many times and identified the themes and constitutive patterns. Then, they discussed the differences in their data analysis and continuous analysis and discussion were repeated until agreement was reached.

As a result, the researcher followed those criteria to ensure establishing rigor as follows;

2.5.1.1 Credibility

Credibility focuses on the trustworthiness of the data collection, analysis and conclusion (Connelly, 2016). The researcher used use of peer debriefing, which relies on transcripts and themes identified by other researchers. Particularly, Three qualitative researchers participated in analyzing the transcripts and eliciting themes and sub themes. Namely, Dr. Adnan Sarhan, Prof. Jihad Abbadi, and the researcher himself. The purpose of showing rigor is to legitimize naturalistic investigation. The researcher relied on them as a critic and they reviewed the interview guide too. All participants were asked to sign a consent form and were informed that they could request written feedback on the research findings. Moreover, The researcher attempted to establish credibility by clearly defining the purpose of the study and asking open-ended and non-directed questions. To support credibility, the researcher contacted some of the participants and showed them the results of the study to make sure that the results reflect their true experience.

2.5.1.2 Dependability

Dependability means stability of the data over the time and condition of the study (Pilot & Back, 2014). Wherever credibility exists, dependability is also ensured. Dependability encompasses the reliability of the findings.

The findings of this study are dependable as they are similar to previous researches, as evidenced by the studies used in the literature review. Thus, the results are predictable and stable over time. The process is described in sufficient detail to facilitate another researcher to repeat the work.

2.5.1.3 Transferability

Transferability refers to the generalizability of the inquiry. In qualitative research, this concerns only case-to-case transfer (Tobin & Begley, 2004). Thus, in the current study, the site, selection criteria, methodology, and implementation of interviews and analysis of the collected material were thoroughly explained to facilitate the replication of the research in another context. In addition, the transcripts and interpretative notes support the research capabilities of being repeated.

2.5.1.4 Confirmability

Confirmability is concerned with ensuring that the researcher's interpretations and findings are derived from the collected data without bias on the part of the researcher (Pilot & Back, 2014). Actually, the researcher followed the analysis model described by Ricoeur, 1976, 1984 and tried to be true to the stories of the participants and express their experience without bias. The researcher chose a phenomenological approach to the theme, which provided additional information about the findings. Non-directed questions were also used to allow participants to speak freely and without any pressure. In addition, using audio tapes through interviews, detailed prints, and notes taken during the interviews with the settings and non-verbal gestures of the participants and a systematic track for the experience of data processing and interpretation supports conformability. Finally, the researcher documented how conclusions and interpretations come from data in order to demonstrate the conformability.

Chapter Three

Analysis

3.1 Data analysis

The researcher picked the hermeneutic technique, also known as the interpretation method, to achieve a full comprehension of the acquired data. This decision was based on Paule Ricours' recognition of the hermeneutic technique as the most effective method to fully understand texts. The hermeneutic technique, according to Paule, consists of three levels: naïve reading, structural analysis and critical interpretation, and discussion (Ricoeur, 1976, 1984).

3.1.1 Naïve reading

Naïve reading means reading a text with the purpose of gaining an initial understanding of its content and eliciting the broad meaning of it. This step is crucial in the development of the data analysis (Pedersen, 2005). The text should be read several times at this point to gain a basic knowledge of all of the transcripts. Researchers should allow books to speak to them and engage with their minds; then, transfer the meaning from natural language to phenomenological language, so that it can be used in scientific research. In other words, naïve reading is the first step in fully understanding the lived experience of ischemic heart disease patients post coronary artery bypass surgery.

The following is a formulation of the naïve understanding of the interview texts:

After reading the transcripts multiple times, the researcher found that the patients had a wide range of emotions about their new life post the surgery.

To begin with, the patients' reactions to the news that the surgical intervention is unavoidable differed from one participant to another.

In terms of daily life activities post the surgery. The patients stated that they had difficulty sleeping, and that they had pain in the surgical site. Moreover, the patients' diets were restricted post the surgery, which was stressful for some.

The surgery affected the participant psychologically and physically too. There is no such thing as a complication-free surgery. Given CABG is a major operation, some participants experienced respiratory problems and some gastrounirary complications.

As for the patients' support groups, the researcher noticed that all participants had a familial support system during their stay at hospital and at home as well.

Besides, most hospitalized patients, whether in private or public hospitals, received the best quality of care from healthcare providers including doctors and nurses. However, some patients reported financial difficulties in the private hospitals.

At the end of the interviews, the participants proposed some suggestions to the healthcare system and the government in order to better meet the needs of the patients and promote their health.

3.1.2 Structural analysis

This level is used to open up the whole text to facilitate interpretation. The primary researcher should write what is said /observed by the participants in other words “units of meaning”, then convert their speech to “units of significance”, or what the text discusses. This process leads the researcher to elicit subthemes and eventually main themes (Ricoeur, 1970).

In the current study, the researcher performed structural level analysis by beginning with what the participants said or what the researcher observed about the participants' lived experience following CABG surgery. Furthermore, body language, voice tone, and facial expressions were observed.

Hence, after the researcher read the transcript many times using naïve reading, he started to divide the text into units of meaning, then condensed it to units of significance to facilitate the emergence of subthemes and themes. The following table demonstrates the structural analysis for the current study in Appendix (D).

3.2 Results

After interviewing 21 participants: 20 males and 1 female, transcripts were written and read many times by the researcher. Then, a full understanding of the text as a whole was established. Following that, various themes and sub themes were extracted. Exactly, the following 9 themes and 43 subthemes were identified in Appendix (D).

3.2.1 Various reactions towards the surgery event

The first theme derived from the lived experience of ischemic heart disease patients post the surgery was their reaction to the news that they would have to undergo the surgery. It is critical to understand the participants' reactions toward the news that going through a surgical intervention is inevitable, and that treating the occluded coronaries by stents or medication no longer works. The participants had different feelings and emotional conflicts toward the event. The researcher identified various reactions from the participants when they learned from their doctor that they would have to undergo the surgery. Their reaction ranged in scope from reacting normally to the news or event to suffering from fear, surprise, or hesitation. However, in the end, all of them adapted to the fact that having the surgery is a must.

3.2.1.1 Normal reaction towards the surgery event

During the interviews, the researcher found that two participants were very relaxed and even happy when the doctor spoke with them about the necessity to have the surgery. They accepted that option without much thought because they were aware of their health condition, and it was predicted that they would undergo CABG surgery sooner or later. As a result, they reacted normally. One of the participants (P10) said, “Really, I knew I had problems in my vessels. I wasn't surprised and expected the surgery.”

Given all participants were Muslims and have a great faith in God, they reacted normally. Hence, the researcher found that spirituality and faith offered people hope and optimism about the surgery. This finding can be exemplified with what one participant (P12) stated, “It was normal, and I was happy and laughing (thank God). I wasn't afraid.”

3.2.1.2 Fear from the surgery

One participant was terrified when the doctor told him he had to undergo the surgery even though the doctor told him that open-heart surgeries in our Palestinian hospitals have a success record of over 95%. However, surgical operations in general, particularly open-heart surgery, are stressful for patients, especially after the surgeon clarified that it is a serious operation. It necessitates general anesthesia and, in some situations, the heart must be stopped during the procedure. Thus, the patient get terrified of the surgery. For example, one participant (P14) admitted, “I was terrified, but when the individual is sick, he seeks help.”

3.2.1.3 Surprise from the surgery event

In the medical field, certain news is regarded surprising for patients when they hear it for the first time from a healthcare practitioner, due to a variety of factors. According to the participants, 13 of them had no prior medical history or cardiac symptoms, such as chest discomfort or shortness of breath, and sought medical treatment after becoming weary due to minor symptoms that were not typical of a heart attack. One participant (P12) reported “I was surprised because I had no history of illness or heart disease. The occurrence was unexpected and developed rapidly.” Furthermore, three of the participants were surprised when the doctor informed them that they needed CABG surgery despite the fact that they were already aware that they had cardiac problems. They did not expect, however, that the surgery would be unavoidable and necessary for their survival. One of the participants (P3) stated, “I didn't think it would get to open-heart surgery.”

3.2.1.4 Shocked by the surgery event

When they learned that they needed open-heart surgery, two of the participants were shocked. They already had doubts about their diagnosis and didn't believe that they need an operation, so the decision to undergo the surgery was shocking to them. Moreover, it was clear from their facial expressions in the interview that they were astonished when the doctor broke the news to them; one participant (P3) commented, “I was a little bit shocked then I adapted.”

The event was shocking not only to the patients, but also to the patients' relatives, as one participant (P10) said, “My reaction was that I got shocked, since I am just 42 years old and have never had any previous diseases. It was a shock to me and my family.”

3.2.1.5 Hesitation to undergo the surgery

8 participants were hesitant whether or not to have the surgery. In general, the cardiac surgeon gives the patient time to think before signing the consent form, and he thoroughly explains the procedure to the patient, including the risks and benefits. They took a long time to make a decision, meanwhile, there were conflicting ideas in their mind, such as whether or not to have the surgery. One of them (P11) stated, “I was really hesitant to go through the surgery because the open-heart surgery is such a huge operation.”

3.2.1.6 Adaptation to the surgery event

The data gathered from the interviews revealed that people had varying emotions to hearing about the surgery and what the doctor told them about their health after checking their heart. When the doctor told them that CABG surgery was absolutely necessary for them to survive, they recognized that their lives would be jeopardized if they didn't undergo it. One participant (P13) said, “Eventually, I agreed because the doctor explained the importance of the surgery for me.”

Eventually, all the participants agreed to undergo the surgery. Despite their fears and concerns, all of them ultimately adapted to the news; due to their faith in God and their belief that life and death are in God's hand. All the participants were Muslim and religious, which gave them the strength to go on in life. Thus, they accepted to undergo the surgery and signed the consent form. One participant (P3) said, “I have a deep faith in God.”

3.2.2 Restricted life post-CABG

The patients faced some limitations in their lives during the post-surgery period, and their experiences with these limitations differed from one participant to another. The interviews revealed that all of the participants' lives were restricted on various levels, including restrictions on daily life activities, sleep difficulties, dependency on others, and finally quitting smoking.

3.2.2.1 Restricted daily life activities post-CABG

Daily life activities were a major concern for the participants post-CABG surgery because they faced some restrictions and limitations on smoothly performing them. The majority of participants stated that pain is the primary reason for their limitations on daily activities. All the participants reported that they had numerous wounds and scars in their bodies because of the surgery. Thus, pain in the surgical site in the sternum and legs prevented them from moving freely, wearing their clothes without assistance, and even driving for long periods of time, as one participant (P2) stated, “Really, the pain prevented me from doing my daily life activities smoothly, and I have difficulties driving my car for long periods of time.”

As a result of the surgery, the participants’ range of motion was severely limited, and they were unable to lift heavy objects as they used to in the past. For example, one participant (P3) said, “At first, my movement was limited, and I couldn't carry heavy objects.”

Restrictions on daily life activities extended to include religious practices too, like praying. All of the participants were Muslims. They reported that after the surgery, they began to have difficulties in praying smoothly because it demands various movements that they found it difficult to perform, such as sitting and binding. One participant (P19) stated, “After my discharge to home, the doctor advised me to rest totally, and I couldn't bind while praying. As a result, I began to pray on the chair. I had trouble putting on my clothes as well.”

3.2.2.2 Difficulties in maintaining sleep post-CABG

The presence of pain, particularly during the first month following CABG surgery, affected the quality of sleep of the most participants, which in turn affected their quality of life. To illustrate, one participant reported that he had sleeping problems that affected his quality of life and limited his day-to-day activities because he was always tired and lethargic. There were numerous factors that limited and disrupted his sleep including chest pain, sternum pain, and back pain, medications, hormonal changes and psychological effects.

Aiming to maintain his sternal wound integrity, the doctor advised him to stay and sleep on his back to prevent opening the sternum, sternal friction and pain. It was difficult for him to sleep on his backs, so he woke up frequently during the night. He (P2) put it, “In terms of sleeping, the doctor advised me to sleep on my back for three months. Yesterday, I awoke twice because I discovered I was sleeping on my side, which increased the pain of the wound.”

3.2.2.3 Dependency on others post CABG

After CABG surgery, performing daily life activities became extremely difficult without the assistance of others. Thus, being dependent on others for an extended period of time was a major concern for the participants. During their hospitalization, the majority of them relied on healthcare providers, particularly nurses, and family members. Even after discharge, they still relied on their families to help with small tasks like getting out of bed, dressing, walking, eating, and bringing their medicine. They needed this assistance especially in the first month after surgery. One participant (P14) commented, “After the surgery, my daughters helped me in my work at home.” While another participant (P6) stated, “The wound is still fresh. You need help from your family to put on your clothes and do simple things.”

3.2.2.4 Restricted diet post-CABG

Some participants reported that they had a history of hypertension and hyperlipidemia, which was a risk factor for developing their condition. Therefore, the doctor advised them to limit their salt and fat intake to protect their health from developing serious consequences, particularly after CABG. Unfortunately, the participants reported that they used to eat unhealthy foods, before the CABG making it difficult for them to follow the dietitians’ and doctors’ advice to restrict their diet after the operation. According to one participant (P3), “I should mainly avoid fat in my diet and eat white meat, soups, and vegetables.” Another participant (P14) remarked, “The doctor advised me to avoid fat, lamb meat, and fried foods in my diet.”

3.2.2.5 Quitting smoking post CABG

All the participants, who were smokers, reported that they had to stop smoking after the operation because they were informed about the dangers of smoking on their health. One participant (P3) said, “The doctor advised me to quit smoking, and I committed.”

3.2.3 The effects of living with coronavirus (COVID-19) on CABG patients .

The researcher found that the COVID-19 pandemic had a significant impact on the majority of the participants' lives in Palestine. However, one participant reported that COVID-19 had no effect on their lives and that they were living a normal life. Though others reported that COVID-19 pandemic impacted all aspects of the participants' lives. It hampered their social life and made their lives more difficult and uncomfortable. In addition, some of the participants became afraid of COVID-19, and unfortunately, one of them got infected with the virus.

3.2.3.1 Normal life during COVID -19 pandemic

Unfortunately, one participant was not used to living with all of the preventative measures that were implemented by the Palestinian Ministry of Health to combat the spread of COVID-19 throughout society, such as wearing gloves and masks most of the time, staying at home day and night, and limiting his socialization with others. Hence, he chose not to follow the measurements and continued to live his normal life as he had before the COVID-19 pandemic broke out. He (P12) stated, “Nothing, I sit with people normally, even without a mask, and I actually stay away from large gatherings.”

3.2.3.2 Restricted social life due to COVID-19 pandemic

COVID-19 pandemic had arrived at the time that the CABG was fresh for most of the participants that had many restrictions imposed on their life. These restrictions were especially related to socialization to prevent the disease from spreading and putting them in danger. COVID-19 posed a significant challenge to social life. One participant (P4) said, “Thank God, I avoid socialization, I sit in my garden and even sleep there, and I contact people through massages.”

3.2.3.3 Uncomfortable life because of COVID-19 pandemic

The participants remarked that the protection from COVID-19 requires a strict commitment to the ministry of health instructions like wearing the mask and gloves all the time and this makes life uncomfortable for them. That is, they feel uncomfortable and suffer from dyspnea when they wear the facemask for long periods of time. One of the participants (P7) said, “Because of corona virus, I must wear a mask, and this makes me feel tired and short of breath.”

3.2.3.4 Fear of COVID-19 virus

The researcher found that fear was common among the participants. For example, one participant (P10) was aware of the danger of COVID-19 on his health and became obsessed with the protection measures against the COVID-19 pandemic during his daily life, which had a negative impact on his psychological well-being. He became really scared of getting the disease and his commitment turned into a phobia in the process. He admitted, “I am really scared. I am afraid of socialization. I have to wake up earlier to go to work, and I wear double masks too. I am really scared.”

3.2.3.5 Being infected with COVID-19

One of the 21 participants was infected with COVID-19. He was interviewed over the phone, and he coughed for the majority of time during the interview. He said,

“I had been infected with coronavirus, which was transmitted to me by my wife. Although my body has been free of coronavirus for 22 days, I still suffer from chest infection and I am taking medications and analgesics, as well as hopping from one hospital to another, which is truly harmful.” (P17)

3.2.4 Post CABG Psychological effects

The researcher found that the psychological status of patients who had CABG in Palestine ranged from hope and feeling like a new person to normal feelings. Furthermore, some participants experienced insomnia and nightmares, as well as feelings of nervousness and isolation.

3.2.4.1 Feeling like a new person

The participants believed that God had given them a new life through this surgery and that they were now a new person with better health and integrity. One of the participants (P15) expressed gratitude to God by saying, “Thanks God, I was so glad. I felt like I was a new person.”

3.2.4.2 Feeling psychologically normal

One participant, had a stable psychological status with no signs of psychological distress. He commented, “No, my psychological status was not affected. I am strong and don't fear anything, and I have a strong faith in God.” (P21)

3.2.4.3 Suffering from nightmares and insomnia

Furthermore, insomnia was a common complaint among the participants after CABG, and one of them came to despise the night period because he believed it was too long without sleep. He said, “I despise sleeping, and I despise the night as well. I think it's far too long.” (P2). In addition, nightmares were another nighttime issue that harmed both the quality of sleep and the psychological well-being of the participants. In the words of another participant, “In the first stage after the surgery, I experienced plenty of negative feelings at night, and I developed nightmares that began after discharge and lasted for one month, then it disappeared.” (P7). As a result of all this, CABG patients were unable to maintain sleep. In reality, they only sleep for a few hours at a time and wake up frequently throughout the night. Accordingly, one of the participants (P6) stated, “I have trouble staying asleep; I sleep for 5-6 hours but wake up frequently throughout the night.” Fortunately, all of these sleeping difficulties usually subside after a short period and never persist. For example, one of the participants (P11) stated that “sleeping was almost non-existent for the first 10 days following the surgery, then it became limited, and it has now improved.”

3.2.4.5 Nervousness

CABG surgery had a significant impact on the patients' psychological well-being. In fact, the researcher noticed that stress and nervousness were major psychological issues that the participants faced after the surgery and lasted for a period of time. This can be linked to a variety of factors, including hormonal changes, pain, drugs, and the fear of

relapse after recovery. One of the participants (P14) stated, “At first I was nervous, I get angry from everything.”

3.2.4.6 Feelings of isolation

Unfortunately, isolation had a negative impact on the participants' psychological and mental health, leaving them with depression symptoms and feelings of loneliness. For example, one participant (P3) remarked, “I was isolated after the surgery because the doctor advised me to limit contact with people due to the fact that my immune system is weak due to the surgery, and I am committed, as is my family, so I feel lonely.”

3.2.5 Post CABG Physical changes

In this study, the researcher found that CABG played a significant role in improving the participants' quality of life and relieving angina and shortness of breath symptoms. It, on the other hand, had negative physical consequences and changes, particularly during the early postoperative period, such as pain, numbness in the legs and hands, itching at the wound site, changes in body weight, blood sugar irregularities, and in some cases, shortness of breath.

3.2.5.1 Physical improvement

The results showed that the participants' physical condition had improved after the surgery when compared to before and that they believed they were getting better now. One of the participants stated, “Yes, the surgery improved my health, and now I can go upstairs and feel the difference.” (P5). In general, symptoms of CAD such as shortness of breath were resolved, as another participant reported, “Before the operation, I was complaining of shortness of breath. I couldn't keep walking for more than 2 meters. Now all of this has improved, and no shortness of breath is there any longer.” (P6). Besides, one participant complained of vomiting due to cardiac origin and myocardial infarction, but the problem was resolved after the operation; as he stated, “before the surgery, I was complaining of vomiting, but now I am not.” (P4). The most common symptom that IHD patients complained about was chest pain, which was also resolved, according to another participant, who said, “Chest pain improved and got resolved now.” (P8). Generally speaking, the participants' overall physical condition has improved post CABG.

3.2.5.2 Pain

The researcher found that all of the participants were in pain even after being discharged to their homes. Pain in the chest, legs, and muscles was reported by one participant as he complained,

I still have pain in the site of the surgery in my chest and leg too, and still have general pain and muscle cramps in my arm and chest and muscles, it continued for more than 20 days after the surgery, and sometimes it happens even now. (P13).

Therefore, pain management is critical for the patients following CABG both in the hospital and after discharge until their condition improves.

3.2.5.3 Numbness

The researcher noted that numbness is common among participants post CABG particularly in the wound site, in the leg that is related to the surgeon's incision in the leg to harvest the saphenous vein for use as a graft in the affected coronary artery. He reported, "I had numbness in my leg." (P4)

3.2.5.4 Itching

Postoperative itching or pruritus was a common health condition that the researcher observed in some participants after CABG. One of the participants reported itching at the surgical wound site, particularly in the chest. He stated, "after the surgery, I developed itching in my chest, and it is still happening now." (P7).

3.2.5.5 Changes in body weight

According to the researcher's findings from the collected data, changes in body weight were common among the participants. In general, the researcher found that the participants lost weight while they were in the hospital, particularly those who stayed in the hospital for an extended period due to loss of appetite and decrease in oral intake, as one participant reported, "I developed weight loss when I was in the hospital. I developed a loss of appetite and anemia. Now my appetite is better and my weight is rising. Actually, before the surgery, I was 90 kg and now I am 85 kg." (P18). In fact, after being discharged from the hospital, the participants were able to eat normally again, and their appetites returned to normal. Because of their sedentary lifestyles at the time, they put on weight quickly after the surgery; as another participant explained,

“I put on approximately 11 kg after the surgery. My belly is obvious now. My appetite got better may be due to the sedentary life these days. I used to go to work from morning to sunset, and now I stopped going” (P9).

3.2.5.6 Blood sugar irregularities

The researcher found that one participant experienced irregularities in his blood sugar levels while he was in the hospital's in cardiac care unit. He reported, “My blood sugar was irregular inside the hospital due to medications and fluids, but at home it became stable in the range between 100 and 140.” (P17)

3.2.5.7 Shortness of breath

Shortness of breath, also known as dyspnea, was a common health problem that affected the participants after CABG, particularly in the first few weeks after being discharged from the hospital. The following is what one of the participants said: “I was complaining of shortness of breath, after walking in slop ups, I rest for a while before continuing.”(P15). To treat dyspnea, breathing exercises and the use of a spirometer are recommended both before and after surgery.

3.2.6 Complications post CABG

The researchers found that the participants who underwent CABG in Palestine, West Bank experienced numerous complications following the surgery. These complications include pulmonary complications like pleural effusion and pulmonary edema; cardiac complications such as arrhythmias and cardiac arrest; urinary complications such as dysuria; gastrointestinal complications such as constipation; and skin complications like bedsores, wound infections and finally leg swelling.

3.2.6.1 Pleural effusion

One of the participants experienced pleural effusion after CABG, necessitating readmission and fluid withdrawal to alleviate the symptoms. He said,

“After two weeks of the surgery, I developed water around my lungs, as my doctor stated in the clinic visit. Thus, he has withdrawn around one bag from my chest and gave me a spirometer. I worked hard on the spirometer, and on the second visit, he told me that my chest is dry now.” (P9)

3.2.6.2 Pulmonary edema

The researcher noted that one of the participants had developed pulmonary edema following the operation. This condition was detected and immediately treated by the doctor during a routine clinic visit. Using a spirometer and taking prescribed medications after a CABG procedure help reduce the risk of developing pulmonary edema after the procedure. He said,

“After two weeks of surgery, I developed water in my lungs with few symptoms. My doctor took an image of my lungs and informed me that I had water in my lung tissue. I was given a spirometer and some medications, and it was resolved.” (P8).

3.2.6.3 Bedsores

The research findings revealed that bedsores occurred in CABG patients and persisted for a period after they were discharged to their homes. One of the participants shared the following information: “Because I was sleeping on my back, I developed bedsores. It was in the hospital and continued at home.” (P11). The truth is that early mobilization following the surgery, good nutrition, and changing the patient's position numerous times while sleeping on their backs can all help to relieve the soreness.

3.2.6.4 Wound infections

The findings of this study highlighted that wound infections and open wounds due to the infection are serious complications that may occur in patients who have undergone CABG in Palestine. The findings necessitate immediate medical attention, as well as surgical intervention in severe cases. The following is what one of the participants said:

After being admitted to the intensive care unit, my wound was open on the open ward, where the doctor took a swap culture from my wound. Then, he informed me that I had bacteria in the wound, so he advised me to stay at the hospital for another 14 days. Meanwhile, I was required to do daily dressings. Then, they repeated the swap culture, and the doctor stated that there were no bacteria anymore (P17).

3.2.6.5 Constipation

One of the participants suffered from constipation after the surgery that made him feel uncomfortable and restricted his eating and drinking. He reported, “I got constipated in the hospital and could not pass stool for 25 days. My abdomen will distend if I eat or drink anything.” (P17).

3.2.6.6 Urinary retention and dysuria

In fact, one of the participants reported urinary retention and dysuria post-CABG as a result of the removal of the foley catheter, as he stated, “I couldn't pass urine after the foley catheter was removed.” (P17)

3.2.6.7 Cardiac arrest and arrhythmias

The current study showed that Cardiac arrest and arrhythmias occurred with one of the participants. Fortunately, he survived. He said,

One day after the operation, I developed cardiac arrest. I woke up while they were resuscitating me, and the doctor gave me an electrical shock. I stayed in the intensive care unit for six days before being discharged to my home. (P20)

3.2.6.8 Leg swelling

One of the participants reported having swollen legs while he was in the intensive care unit and after he was sent home. He underwent a saphenous vein graft, which resulted in swelling in his leg. He stated, “I developed swelling in my right leg due to immobilization for some time, and the doctor removed the vein from my right leg.” (P17) Edema and bed rest also play a role in developing leg swelling.

3.2.7 Support groups for CABG patients

Indeed, the researcher found that the support groups for patients who underwent CABG in Palestine could include family, friends, or relatives, as well as healthcare providers who help the patients physically, psychologically, and financially post CABG.

3.2.7.1 Family and friends as a support group for CABG patients

The researcher found that all of the participants were supported by their families, relatives and friends. For example, one participant said that his family and friends were always beside him and he said, “My son came from Saud Arabia to support me” (P2). Proving that people in Palestinian communities are very connected. The following is what another participant stated: “my friends, my wife, my neighbors, relatives and my mom supported me.” (P3).

3.2.7.2 Healthcare providers as a support group for CABG patients

Based on the interviews, the researcher found that, in general, the medical team and healthcare providers, whether in private or public hospitals, were supportive, knowledgeable, and experts in dealing with cardiac patients. They provided their help and support throughout their hospitalization, their stay in the cardiac intensive care unit, their discharge, and their clinic visits. One of the participants commented ,

Visiting the cardiac unit exceeded my expectations in terms of nursing experience, politeness, and level of care provided. The doctors kept in touch with me after the surgery on a regular basis. They all kept an eye on me, and they all supported me during my hospital and clinic visits as well. (p3).

3.2.8 CABG Patients’ perspectives on the Palestinian healthcare system

3.2.8.1 The healthcare system was integrative

Two of the participants reported that the Palestinian healthcare system was integrative while treating them: from the first diagnostic visit to the experience of admission and hospitalization, to dealing with procedures and policies in the institution, management, and quality of services that were provided to them during and after hospitalization. They expressed that there were no obvious differences between private hospitals like Ar-Razi Hospital, Specialized Arab Hospital, An-Najah National University Hospital, and the public sector that was represented by Palestine Medical Complex. One of them reported, “Really, I haven't seen any healthcare system like this. The doctors, nurses, workers and cleaners were working in an integrative way.” (P17). And another participant said, “I didn’t face any difficulties in entering the healthcare centers. I was admitted smoothly and directly. Everything was perfect and facilitated starting from the insurance to the financial issues to the approach.” (P21).

3.2.8.2 The healthcare system was acceptable with some limitations

According to other participants, the Palestinian healthcare system, in general, was acceptable, from medical facilities to services and financial issues. Because nothing is perfect, it was good. To find out why some participants with IHD who had CABG were dissatisfied with the Palestinian healthcare system due to system limitations, the researcher looked into the perspectives of participants who had IHD, and the reasons were as follows: four of the participants had financial problems while being admitted to private hospitals in general, as one of them reported ,

It's not perfect, but it's adequate. In fact, some healthcare providers treat patients well, while others do not, and according to finance, especially in private hospitals, they do not take care of you without payment, but, in general, the healthcare system is good, with doctors and nurses doing their job well. (P2) .

Another participant had difficulties to reach the hospital for treatment, because there is a lack of cardiac centers in his city so he complained, “The healthcare system is good, but in my city there is a lack of cardiac centers, and I have to travel to another city which is too far.” (P1). One of the participants felt that there were limitations in focusing on the psychological and mental health of cardiac patients, as he stated, “Our healthcare system is good and provides perfect physical care for us post-surgery, but it's limited psychologically and mentally, and I think that mental and psychological status post open-heart surgery are more important to care about.” (p2). Another participant stated that there is a lack of healthcare providers, which causes the available ones to burn out and prevent them from providing the best care and services possible; he stated, “I believe there is a shortage of healthcare providers.” (p20). Finally, another participant noted that health education is limited and should be one of our healthcare system's priorities, so he reported, “Everything is fine, but health education is limited in our healthcare system, and it's very important for primary prevention.”

3.2.9 The financial effects of the surgery on CABG patients

Financial issues are extremely important to the participants, especially in the light of the economic and political circumstances in which the Palestinian people live. Therefore, the researcher concentrated on the effects of CABG on the Palestinian patients and their families. The findings revealed that some participants were not financially impacted, whereas others were financially affected by CABG, as some of them had to stop working for a period of time and were the primary breadwinners for their families, and others had to pay large expenses that CABG required, which had a negative impact on their financial situation.

3.2.9.1 Not affected financially by CABG

Two of the participants were not financially impacted as a result of CABG, which was due to the health insurance system in Palestine and the government's financial coverage for health services. The government actually covers up to 95 percent of CABG expenses, leaving only a small amount of money to be paid by the patient for hospitalization compared to what the insurance system covered. One participant said, No, I didn't feel that it had an impact on my financial situation; I have financial coverage of 95 percent, so I only had to pay a small amount of money in comparison to what the government paid for me. (P7)

3.2.9.2 Stopped working because of CABG

CABG requires the patient to rest during hospitalization and after discharge in order to return to normal life and work. The study findings exposed that the participants whose work required too much physical effort, had to switch to jobs that required less physical strength. Moreover, the private-sector employees were also financially impacted because they had to stop working during their illness, as one participant said,

Really, it affected me financially. I work for a private company and that means I don't have the right to take leaves at the expense of my company, and now I stopped working for some time due to my health condition. I have no source of income now. (P3).

3.2.9.3 Large expenses because of CABG

The CABG journey from the admission to discharge, and even after the discharge, require a lot of expenses to be paid especially during hospitalization. These expenses include the outpatient drug prices, equipment, transportation, clothes, hospital fees and meals outside of the hospital. One of the participants reported, “Yes, it affected me badly. I spent all I had, and there were many expenses to be paid, during staying in the hospital from food to transportation.” (P17).

Chapter Four

Discussions and Conclusions

4.1 Critical interpretation and discussion

This study aimed at investigating the lived experience of ischemic heart disease patients who underwent CABG in the West Bank, Palestine. This will help the patients better understand their wants and needs, so they can work toward achieving some level of satisfaction with their health and lives. This study aspires to improve the overall quality of healthcare in Palestine and the efficiency of the healthcare system. Consequently, the study aspires to achieve health and well-being, that is one of the United Nations' sustainable development goals (SDG). The study findings uncovered that the lived experience of the participants who underwent CABG varied, and the researcher explored their experience from different domains, using a holistic approach in accordance with the literature, to better understand their experience.

4.1.1 The participants' reactions toward the event of going through a surgical intervention

Different reactions were experienced by the patients when they learned that they would be undergoing CABG surgery, particularly in the first few minutes after hearing the news from the doctor. Their reactions ranged from neutral to fear, surprise, and hesitation. They, however, eventually adapted to the event and agreed to go through the surgery. The findings are consistent with the findings of Screeche-Powell and Owen (2003), who investigated the early experience of patients waiting to be accepted for CABG. They highlighted patients in the UK on the waiting list for CABG experienced a range of emotions in response to the surgery, including anxiety, fear, uncertainty, frustration, shock, denial, guilt, hope, and, finally, acceptance.

The researcher attributes the feelings of fear and hesitation to the fact that the patients already know that CABG surgery is a major operation that requires general anesthesia and involves pain afterward.

4.1.2 Daily life restrictions that the participants experienced post CABG

In terms of the difficulties that the participants faced as a result of the surgery, the researcher noted that the main stressor they experienced after the surgery was the restricted life post-surgery, which is one of the main themes elicited from this study. The researcher attributes these difficulties to that CABG involves opening the sternum, numerous wounds and scars throughout the body, hemodynamic instability, hemodynamic and blood loss, and pain that takes time to resolve after the surgery (Melly et al., 2018). All of that makes it difficult for the patients to perform some tasks smoothly. Limitations on daily life activities, difficulties in maintaining sleep, dependency on others, restricted diet, and the need to quit smoking were all examples of the patients' restricted lives. It's interesting to note that these results are in line with those of a study done by Chandran, which found that patients who have undergone CABG surgery faced a variety of stressors, including the strain of being confined to bed for days, difficulties in eating whatever diet they choose, and the necessity of relying on others after the procedure (Chandran, 2005). The findings also agree with those of Sun, et al. who found that disability was the most common side effect experienced by CABG patients one year after surgery. Realistically, disabilities affect both men and women equally, but women are more likely than men to suffer from them, and the risk is higher for those with heart failure (Sun et al., 2018).

As previously stated, one of the post-surgery main restrictions that the participants complained about was sleeping. The researcher revealed that for a period of time after the surgery, the quality and consistency of sleep were affected. Then, everything went back to normal. The researcher indicated that these sleep difficulties were related to a variety of factors, including wound pain, hormonal changes, and the need to sleep on one's back for a while following the surgery. These findings are consistent with the findings of EdéllGustafsson, Hetta, and Aren who conducted a study which highlighted that the quality of sleep after CABG was affected in the first month after surgery, affecting the quality of life as well. That is, the patients used to wake up frequently during sleep and were unable to sleep for long periods due to reasons related to the operation itself and hemodynamic changes. However, they stated in their study that 6 months after the operation, the quality of sleep returned to normal (EdéllGustafsson & Hetta & Arén, 1999).

Moreover, the restrictions on the participants' diet can be explained by the fact that diet and cardiovascular diseases (CAD) are inextricably linked. Numerous studies have shown that eating red meat, which is high in fat, harms heart health. As a result, a high-fat diet is regarded as a risk factor for developing CAD (Victoria et al., 2021). Other studies have found that a high salt intake is a risk factor for developing CAD. It also has negative consequences for patients who have had CABG. Of course, the risk rises in the presence of diabetes and hyperlipidemia (Xue et al., 2020). Thus, diet is very important for post-CABG patients to meet their needs but with restrictions on salt and fat intake. Concerning the situation in Palestine, the Palestinian healthcare system is concerned with the patients' diet by providing health education by dietitians. The Palestinian healthcare system is also concerned with serving a suitable diet for the patients while they are inside the hospital, taking into account the health status of each patient individually.

As the results revealed, the diet restriction didn't only include food but it extended to advising the participants to quit smoking. Mainly, tobacco use is a major risk factor for developing coronary artery disease (CAD). Undoubtedly, cigarette smoking has negative effects on the heart and coronaries, particularly in patients with ischemic heart disease, especially after CABG surgery, including an increased risk of vein graft atherosclerosis, which can lead to myocardial infarction (MI) and cardiac death. Thus, quitting smoking after CABG is associated with a lower risk of developing atherosclerosis that necessitates revascularization procedures. That is, quitting smoking can help lower mortality rates (Van Domburge et al., 2000).

4.1.3 The effects of living with coronavirus (COVID-19) on CABG patients

The researcher found that the COVID-19 pandemic had a significant impact on the majority of the participants' lives in Palestine. This result goes in line with some researchers who conducted studies to determine the effect of COVID-19 on CABG patients. In their study, they explained the condition of COVID-19 patients who had undergone cardiac surgery in North America. Their study revealed that COVID-19 had serious consequences for CABG patients, including respiratory failure and death (Ad et al., 2020).

The researcher attributes the impact of corona virus on the participants' lives to the fact that these days, COVID-19 is regarded as the disease of the century. In practical terms, the COVID-19 pandemic is a major public health crisis around the world. Furthermore, it has placed a significant strain on the international healthcare system and its resources (Gates, 2020). However, some participants reported that COVID-19 had no effect on their lives and that they were living a normal life. The researcher attributes this to that they are unaware of the danger of the virus on their condition so they decided to unfollow the protection measurements. But, in general, the COVID-19 pandemic had an impact on all the aspects of the participants' lives. It hampered their social life and this was difficult for the participants. The researcher explains this generally by saying that restricted social life was difficult for the participants because socialization is necessary for human survival. This includes living with others, sharing ideas, and being with groups, families, and friends without boundaries or restrictions. Moreover, the researcher emphasizes that Palestinians, in particular, used to be extremely social all of the time, as evidenced by extended families. According to demographic data, the researcher noticed that many families in Palestine are extended and living with each other with strong ties, which is common in various areas of Palestine. Unfortunately, the COVID-19 pandemic arrived and imposed many restrictions on people, particularly in terms of socialization, in order to prevent the disease from spreading. As a result, the participants felt that they are socially restricted, and they complained about that.

Moreover, the study showed that this pandemic made the participants' lives more difficult and uncomfortable. This was exemplified by a participant who complained about wearing the mask and commented that it makes him uncomfortable. The researcher links the uncomfortable feeling that the participant feels to the fact that wearing the mask for a long period affects acid-base balance in the body by trapping the CO₂ inside the lungs and that makes people feel uncomfortable and prevent them from continuing to wear the mask.

In addition, some of the participants became afraid of COVID-19. The researcher justifies their fear by stating that the COVID-19 pandemic is rapidly spreading throughout the world and affecting everyone. The truth is that it is extremely harmful to the lungs, especially for those who have had open-heart surgery, as their condition will deteriorate. This virus can also result in acute respiratory distress syndrome, interstitial

lung inflammations, and alveolar damage (Jain, 2020). The unfortunate reality is that COVID-19 is a dangerous disease that can lead to respiratory failure and even death in patients who have undergone CABG.

4.1.4 The psychological difficulties that the participants experienced post CABG

The participants' psychological states ranged from hope and a sense of being a new person to insomnia, nightmares, nervousness, and isolation.

The majority of the participants described themselves as “new people” following CABG. They believed that God had given them hope and a new life post the surgery. This finding is consistent with the findings of Mohammadi et al. who found that the majority of participants in their study felt that God had given them a new life through this surgery and that they now have better health and integrity (Mohammadi et al., 2015). The findings are also in agreement with Heravi-Karimooi, Rejeh, and Abbasi who focused on spirituality following coronary artery bypass grafting. They concluded that the majority of those patients desired to be closer to God. They concentrated on using spirituality and faith to become stronger to face the world and accept their new circumstances in an optimistic manner (Heravi-Karimooi, Rejeh, & Abbasi, 2017).

On the other hand, the results of the current study highlighted that the psychological status of other participants was negatively impacted, as they developed anxiety and fear, which led to insomnia and nightmares. This can be supported by another research that demonstrated that the quality of sleep will be compromised after open-heart surgery, necessitating the need for critical nursing intervention after the procedure (Gustafsson et al., 1999). In addition, the results go in line with the observations of Pourghane et al. who conducted a study to investigate the lived experience of CABG patients. The findings revealed that the majority of the patients were afraid of the recurrence of a heart attack, performing daily life activities, traveling, and mass communication. The study also revealed that they were tired of living within the therapeutic framework. In other words, they found it difficult to take many drugs and adhere to a diet. They felt trapped between wanting to accept or reject the treatment (Pourghane, et al., 2014). Suffering from insomnia and the reduction in quality of sleep can be explained by many studies which focused on the quality of sleep during the post-operative period, and they have demonstrated that it is significantly reduced following cardiac surgery, which may be related to anesthesia, the cardiopulmonary pump machine, cardioplegia, and

hormonal changes in the brain (Johns et al., 1974). This way, patients still run the risk of developing cerebral dysfunction, which can result in a decreased quality of sleep following the procedure.

Besides, some participants started to suffer from nervousness which the researcher linked to many factors. These factors include hormonal changes, pain, drugs, and the fear of relapse after recovery, according to what the participants said.

Finally, some participants complained about experiencing some feelings of isolation. Isolation among patients after cardiac surgery is common, particularly in the first month after surgery, when healing and recovery are most critical. Any infection can hurt a patient's health, as well as their healing and recovery. Furthermore, the COVID-19 pandemic is a major respiratory infection that is rapidly spreading in this time frame, and it harms the lungs, particularly in patients who have had thoracic surgery. As a result, those patients should be isolated for some time and kept away from other people.

4.1.5 Physical changes for the participants post CABG

In terms of physical changes following the surgery, the researcher found that the majority of the participants improved physically. According to the study results, the participants' physical condition improved after the surgery compared to before, and they felt better now. This finding is similar to that of Järvinen et al. who demonstrated that CABG has become a preferred method for the treatment of CAD, as after one year, the quality of life for those who had the surgery improves due to restoring blood perfusion to the heart muscle, which improves heart pumping and cardiac output (Järvinen et al., 2003).

Numerous changes occur before, during, and after surgery; since CABG is a surgery that involves the skin, sternum, mediastinum, and cardiopulmonary system. To put it another way, the entire body is involved (Abbasi et al., 2014) All of this results in numerous physical changes in the patients' lives following the operation when compared to before (Paari, 2020).

Some participants reported that they experienced post-operative pain. The researcher states that pain is an expected feeling post the surgery because the CABG wound involves skin, bones, muscles, and soft tissues. In the same vein, literature has shown that pain is a major source of concern for patients who underwent CABG, especially in

the early stages following the surgery (Leegaar, Nden & Fagermoen, 2008). Thence, the researcher stresses pain management is critical for the patients following CABG both in the hospital and after discharge until their condition improves.

Some participants had numbness in the wound site. It is a sensation in a part of the body that feels like pins and needles and is common after surgery in the surgery wound site. The researcher explains numbness by referring to the fact that it occurs post-surgical procedures in the surgical site because the wound affects the nerve endings (Siribumrungwong et al., 2019).

Furthermore, post-operative itching or pruritus was a common health condition that the researcher observed in some participants after CABG. The researcher attributes this to the fact that the mechanism of post-operative itching is extremely complex (Waxler et al., 2005). Indeed, it has several pathways to develop, and this is linked to a number of mediators that may occur after the surgery, such as histamine release, which can stimulate nerve endings. Additionally, prostaglandins and leukotrienes may be released following the surgery, which can increase the sensation of pain and itching (Greaves, 1992). Apart from this, some medications can cause pruritus, such as opioids, which are commonly prescribed after CABG to help patients cope with the pain (Ständer et al., 2002). Antibiotics, such as penicillin, vancomycine, and rifampin, can cause itching as well (Katz, 2001). In fact, all of the participants have been on antibiotics for an extended period of time. All of this can be possible triggers for pruritus.

Following on the physical changes that the participants experienced post CABG, some participants reported experiencing changes in body weight due to ups and downs in their appetite post the surgery at the hospital and at home. The researcher found that one participant experienced irregularities in his blood sugar levels while he was in the hospital's cardiac care unit. The reason for this could be related to medications and stress, both of which have an impact on glucose levels in the participants. In addition, this participant has diabetes and researches have shown that patients with diabetes are at a greater risk of developing blood sugar irregularities following the surgery, which increases the morbidity and mortality rates among patients undergoing CABG (Masla et al., 2001).

Besides, some participants had shortness of breath post the surgery. This result is in accordance with Zimmerman et al. who stated that shortness of breath, also known as dyspnea, is a common health problem that affects patients after CABG, particularly in the first few weeks after being discharged from the hospital (Zimmerman et al., 2002). The researcher explains dyspnea in CABG patient because it is associated with the inability to completely expand the lungs following the surgery as a result of chest wound pain, which gradually improves (Tsai et al., 2019).

4.1.6 Post - surgery complications for CABG patients

CABG surgery is a serious procedure that can result in a variety of complications. According to the findings of this study, patients who underwent CABG in the West Bank of Palestinian territories experienced a number of complications after the surgery, including pulmonary complications such as plural effusion and pulmonary edema, cardiac complications such as arrhythmias and cardiac arrest, urinary complications such as dysuria, gastrointestinal complications such as constipation, and skin complications such as bed sores and wound infection, as well as leg swelling. These findings are consistent with those of a study conducted by Stefater et al. which found that the complications following CABG in general include strokes, renal failure, deep sternal wound infections, prolonged intubation, unplanned reoperation, gastrointestinal complications, and respiratory complications, among others (Stefater et al., 2012). In particular, it should be noted that the study results demonstrated that plural effusion was a common complication after CABG. That is, many of the participants developed plural effusions following CABG, which require readmission and fluid withdrawal to relieve the symptoms. This is consistent with the findings of Jana et al. who estimated that approximately 50% of patients develop plural effusion after CABG (Jana et al., 2013). Moreover, the results are compatible with Sadikot, Ruxana, et al. who found that the symptoms of plural effusion after CABG ranged from mild to severe, including dyspnea and chest pain (Sadikot, Ruxana et al., 2000). This goes in line with Brookes et al who stated that patients after CABG have drains for the drainage of blood and fluids from the plural space, and earlier removal of these drains leads to the development of plural effusion, and the risk increases with the presence of renal impairment, and pericardial effusion, which require readmission and re intubation in severe cases (Brookes et al., 2021).

Beside the aforementioned complications, pulmonary edema, which is the accumulation of extravascular fluid in lung tissue and alveoli, is another pulmonary complication that can impair ventilation and gas exchange (Jensen, Yang, 2007). The researcher found in this study that some participants suffered from post-operative respiratory distress syndrome, which was detected by the doctor during the clinic visit and managed immediately. This finding is in line with the findings of Schuller and Morrow (2000), who found that pulmonary edema is a serious complication after CABG and that the risk of developing pulmonary edema increases among patients after CABG, particularly those with a history of heart failure. Additionally, this problem is common in patients suffering from chronic pulmonary diseases such as Chronic Obstructive Pulmonary Disease (COPD) and post-operative sepsis (Schuller, Morrow, 2000).

Another complication that the researcher identified among the participants post CABG was wound infections. According to the literature, infected wounds are a major complication following open-heart surgery, and they increase the mortality and morbidity rates among the patients who have undergone CABG surgery (Biancari et al., 2020). The researcher highlighted that wound infections and open wounds due to the infection are serious complications that may affect patients after CABG in Palestine and necessitate immediate medical and surgical management in severe cases. These findings are in agreement with Oswald et al. who stated that deep sternal wound infection after CABG is a serious complication and that the risk for wound infection is higher in patients who had CABG using internal mammary artery grafting, which has been shown to be associated with both deep and sternal wound infections (Oswald et al., 2020).

As for gastro intestinal complications, the researcher found that it was one of the most common post-CABG complications. These findings are similar to those of Oshvandi et al. who showed that constipation was common among participants and it occurs with about 28.2% of CABG cases. Patients undergoing CABG surgery are more likely to develop constipation if they are given opioids, which is necessary in the first few days after the operation and is used frequently (Henry et al., 2020). Bed rest and inadequate fluid intake increase the risk of developing paralytic ileus, which results in constipation (Haywood et al., 2020). The treatment necessitates early mobilization, increased fluid intake, and a reduction in opioid use (Rodriguez et al., 2007).

Moving on to urinary complications after CABG, the study revealed that some of the participants reported urinary retention and dysuria after CABG, which is related to the foley catheter. According to the analysis, the majority of the participants complained about the foley catheter even after it was removed. This is similar to what Katz et al. maintained in their study, as they stated that every patient who underwent CABG or any cardiac surgery left the operating room with a foley catheter, and that may lead to urethral stricture (Katz et al., 1992). In a similar vein, Darrah, Griebeling, and Silverstein demonstrated that the foley catheter is critical for strictly monitoring the output following CABG. However, it unfortunately leads to urethral injury and dysuria and urinary retention even after catheter removal (Darrah, Griebeling, Silverstein, 2009).

Specifically in the field of cardiovascular complications, the researcher found that cardiac arrest and arrhythmias could occur following CABG. Unfortunately, one participant reported that it occurred to him, who was fortunate enough to survive.

This result corresponds with those of Guney et al. who found that Ventricular Tachycardia (VT), Ventricular Fibrillation (VF), Pulseless Electrical Activity (PEA), and systole are considered to be the most lethal arrhythmias following CABG (Guney et al., 2009). Furthermore, the findings are consistent with Edmunds who focused on the management of cardiac arrest and PEA post CABG using effective Cardiopulmonary Resuscitation (CPR) as updated guidelines, which was considered to be the most effective method for the management of cardiac arrest and PEA following CABG, followed by mechanical support like Intra-Aortic Balloon Pump (IABP), Implantable Cardioverter Defibrillator (ICD), ECMO and intensive pharmacological treatment (Edmunds, 2003). The participant awake while healthcare providers was resuscitating him as he mentioned before. In the same vein, the finding also agree with another research conducted by Filardo, et al. which found that the most common arrhythmia that occurs after CABG is Atrial Fibrillation (AF) as it occurs with approximately 33% of CABG cases (Filardo et al., 2018). It is compatible with Thorén et al. who reported that AF post CABG is associated with several complications like ischemic stroke and heart failure that increase the mortality and morbidity among CABG patients and require immediate management and follow up (Thorén et al., 2020).

The research findings revealed that bedsores occurred in CABG patients and persisted for a period of time after they were discharged to their homes. This goes in line with Honaker & Davis who state that bed sores, also known as pressure ulcers, are a common complication that occurs among the ICU patients. Particularly, it happens to patients in the cardiac care unit who have had CABG surgery. This is due to the prolonged period of back and bed rest, which is especially true for patients who have undergone complicated surgeries or who are malnourished (Honaker & Davis, 2009).

The final complication that frequently occurred among the participants was leg swelling. The researcher found that most of the participants experienced leg swelling while they were in the ICU and after discharge to home. In fact, most of them underwent the graft from saphenous vein, which led to leg swelling. In addition, edema and bed rest played a role for developing leg swelling among the participants. These results confirm those of Oshvandi et al. who found that leg swelling is one of the most common complications that occur after CABG and accounts for 40.6% of all CABG cases (Oshvandi et al., 2020).

4.1.7 Support groups for CABG patients

The research highlighted the importance of supportive people in the lived experience of patients who underwent CABG. The researcher revealed that the support groups for Palestinian patients who underwent CABG in Palestine included family, friends, relatives, and even healthcare providers who assisted the patients post-CABG in terms of physical, psychological, and financial well-being after the procedure. This is consistent with the finding of Mooren et al. who noticed that the Palestinian people are extremely connected as one family in the community, and as a result, they always support one another, especially in the case of any insult that may happen to any member of them (Mooren et al., 2018).

In other words, the researcher found that all of the participants were supported by their families, relatives and friends proving that people in Palestinian communities are very connected.

4.1.8 CABG Patients' perspectives on the Palestinian healthcare system

When it comes to providing medical services for cardiac patients, the Palestinian healthcare system can be compared to the European healthcare system (Salameh et al., 2013). As a matter of fact, CABG procedures are now available in both private and public hospitals in Palestine (MOH, 2012). CABG is also successfully performed at both _____ locations.

The participants reported that the Palestinian healthcare system was integrative while treating them. However, according to other participants, it was acceptable, from medical facilities to services and financial issues, with some limitations and the reasons were as follows: financial problems while being admitted to private hospitals in general, difficulties to reach the hospital for treatment because there is a lack of cardiac centers, limitations in focusing on the psychological and mental health of cardiac patients, and a lack of healthcare providers which causes the available ones to burn out and prevent them from providing the best possible care and services.

4.1.8 Financial impact of CABG on the participants

The difficulties that the participants faced post CABG were not only psychological or physical, but also financial. This study showed that the financial issue was very important for the participants, especially in the light of the economic and political situation that Palestinians face. Therefore, the researcher focused on the financial effect of CABG on Palestinian patients and their families. The results revealed that some participants were not financially impacted, which was due to the health insurance system in Palestine and the government's financial coverage for health services. Actually, the government actually covers up to 95 percent of CABG expenses, leaving only a small amount of money to be paid by the patient for hospitalization compared to what the insurance system covered. However, the majority of them were impacted due to CABG-related reasons. For example, some of them had to stop working for a period of time and were the primary breadwinners for their families at the same time, while others had to pay large expenses incurred as a result of CABG, which had a financial impact on them. These results correspond with a study conducted by Vila which evaluated the experience of patients with ischemic heart disease, specifically the significance of their condition during the rehabilitation period following CABG surgery.

The results highlighted financial difficulties were common among patients due to drug costs, transportation costs to the healthcare center, and the surgery itself (Vila, 2018).

4.2 Conclusion

The study findings revealed that the patients had a difficult experience following CABG. They had a variety of reactions towards the news of the surgery, including fear, which demands good communication from the healthcare providers to facilitate acceptance of the news. Besides that, they experienced restricted life after CABG in a number of domains, including restricted daily life activities, restricted diet, and sleep deprivation. These difficulties necessitate support from healthcare providers and family members in order for them to continue living their lives. Another key thing to mention is that the participants' CABG experience intersected with the corona virus pandemic, posing a significant challenge to both patients and the healthcare system, especially given the fact that one participant became infected with corona.

Moving on to the psychological and physical effects of the surgery. The results indicated that the patients who underwent CABG experienced a variety of psychological effects, ranging from a sense of hope with the new life to feelings of isolation and fear. Equally important, the physical changes ranged from better health to pain and ups and downs in the body. Additionally, there were a variety of complications after CABG, including plural effusion and pulmonary edema, as well as bed sores and wound infections, which need more attention to the treatment. Moreover, the findings revealed that the patients received intensive support from healthcare providers, family members and friends, emphasizing the fact that Palestinian relationships are strongly linked so that they help each other and the healthcare system is supportive as well. However, the financial situation was challenging for the participants post CABG due to the inability to work and the large expenses that require support and assistance.

4.3 Recommendations

After interviewing the participants using a holistic question guide, doing in-depth interviews and analyzing the data hermeneutically, the researcher provides the following recommendations to help and support this vulnerable group of patients and to improve their quality of care and life:

4.3.1 Recommendations for the healthcare system

1. To facilitate the financial procedures for CABG patients by providing healthcare for them immediately rather than focusing on the financial issues and providing all the prescribed medication within the hospital without the need to purchase them from outside sources.
2. To construct special wards or buildings for cardiac patients pre and post CABG for clinical visits.
3. To increase the number of medical personnel, particularly doctors and nurses, to keep up with the workload and provide the best possible care to CABG patients.
4. To concentrate on health education and health promotion for the community in order to perform primary and secondary preventions for cardiac diseases.
5. To focus on the patients' psychological status before and after CABG in order to promote healing and wellbeing for them and prevent complications that may occur due to the psychological effects of CABG

4.3.2 Recommendations for the government:

1. To support CABG patients as a vulnerable group by providing assistance and support to them and their families, particularly those who became unable to work due to their health condition following CABG, as well as offering projects that are appropriate for their new health condition.
2. To assist the healthcare system by providing them with the equipment and machines that are critical in the progression of cardiac surgeries, such as ECMO, and by constructing a cardiac center in each country to facilitate the approaches.

4.3.3 Recommendations for the community:

1. To help and support CABG patients because the CABG journey is challenging for the them and to their families physically and financially.

4.3.4 Recommendations for CABG patients:

1. To strictly commit to the doctor or healthcare providers' instructions during hospitalization and after discharge to home.
2. To respect the medical staff and understand the condition of the healthcare system.

4.3.5 Recommendation for future research:

1. To conduct continued hermeneutic phenomenological studies that further explore the themes identified in this research.
2. To conduct studies on larger and more diverse participants including Gaza strip

List of Abbreviations

Abbreviation	Meaning
CABG	Coronary artery bypass graft surgery
IHD	Ischemic heart disease
UN	United Nation
CHD	Coronary Heart Disease
WHO	World Health Organization
CVD	Coronary Vascular Disease
NCD	Non-Communicable Disease
IHD	Ischemic Heart Disease
US	United State
CAD	Coronary Artery Disease
LITA	Lift Internal Thoracic Artery
RITA	Right Internal Thoracic Artery
SVG	Saphenous Vein Graft
RCA	Right Coronary Artery
LDL	Low Density Lipoprotein
HDL	High Density Lipoprotein
PTSD	Post-Traumatic Stress Disorder
PPC	Post-Operative Pulmonary Complication
IMT	Inspiratory Muscle Training
ECMO	Extra Corporal Membrane Oxygenation

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Appendices

Appendix (A)

Question guide:

What was your first reaction when you heard that you should undergo coronary artery bypass graft surgery, and how did you cope with the news?

Did you suffer from any limitations on your daily life activities after the surgery?

Explain.

How did COVID-19 pandemic affect your life? Explain.

Did your doctor put any restrictions on your diet after the operation? Explain.

Did you face any psychological changes after the surgery? Explain.

Did you face any physical changes after the surgery? Explain.

Did you develop any complications after CABG? Explain

Who is supporting you psychologically and physically post the surgery?

How did the health care system focus on your care and healing as a cardiac patient?

Did this surgery affect you financially? Explain.

Do you have any suggestions to improve the health care system regarding cardiac patients? Explain.

دليل المقابلة

1. ما هو شعورك في لحظة تلقيك خبر ضرورة اجراء عملية ترقيع الشرايين التاجية, و كيف تكيفت مع الخبر؟
2. هل واجهتك أي معيقات بخصوص نشاطاتك اليومية بعد العملية؟ فسر اجابتك
3. كيف اثر انتشار وباء الكورونا على حياتك بعد العملية؟ فسر اجابتك
4. هل قام الطبيب بتحديد نظامك الغذائي بعد العملية؟ فسر اجابتك
5. هل واجهتك أي تغيرات نفسية بعد العملية؟ فسر اجابتك
6. هل واجهت أي تغيرات جسدية بعد العملية؟ فسر اجابتك
7. هل عانيت من مضاعفات بعد العملية؟ فسر اجابتك
8. من كان يدعمك في رحلتك العلاجية؟
9. كيف ساهم نظام الصحة الفلسطيني في علاجك و رعايتك خلال مرحله العلاج؟
10. هل أثرت العملية على حالتك المادية؟ فسر اجابتك
11. هل لديك اقتراحات لتطوير القطاع الصحي الفلسطيني فيما يتعلق بمرضى القلب؟

Appendix (B)

معلومات حول الدراسة للمشاركين

عنوان الدراسة:

التجربة الحياتية لمرضى شرايين القلب بعد عملية ترقيع الشرايين التاجية في فلسطين - الضفة الغربية.

مقدمة:

أنا الطالب أيمن سمير محمد عبادي، طالب ماجستير ترميز العناية المكثفة في جامعة النجاح الوطنية، أعمل على تحضير رسالة الماجستير بإشراف الدكتور: عدنان السرحان، حول موضوع مرضى شرايين القلب الفلسطينيين الذين خضعوا لعملية ترقيع الشرايين التاجية.

هدف الدراسة:

الهدف من الدراسة هو معرفة التجربة الحياتية لمرضى شرايين القلب بعد عمليات ترقيع الشرايين التاجية في فلسطين في الضفة الغربية والمشاكل والتحديات التي تواجههم وبالتالي معرفة احتياجاتهم، مما يساهم في رفع مستوى الرعاية الصحية المقدمة لهم.

دورك في الدراسة:

كونك إنسان فلسطيني أقدمت على عملية نوعية وهي ترقيع الشرايين التاجية فإن تجربتك تشكل خبرة وتجربة جيدة ومفيدة للدراسة، لذلك وبعد موافقتك سأقوم بعمل مقابلة معك لمدة 60-90 دقيقة وسيتم تسجيل المقابلة لتسهيل عملية جمع المعلومات وسيتم التركيز على عدة نقاط تخص مراحل معينة من تجربتك الحياتية، وسيتم ترتيب الوقت بما يتناسب مع وقتك.

سرية المعلومات:

تكون جميع المعلومات لاستخدام الدراسة فقط، وتحفظ كافة المستندات والتسجيلات في مكان آمن ومحكم الإغلاق، وتتلف جميع التسجيلات بعد الدراسة، ولن يتم ذكر الأسماء الحقيقية للمشاركين.

حق الرفض بالمشاركة في الدراسة أو الانسحاب:

مشاركتك في الدراسة هي مشاركة طوعية، لك الحق في رفض المشاركة أو الانسحاب من الدراسة في أي وقت من غير تقديم أسباب ولن يكون هناك أي ضرر عليك.

معلومات للاتصال:

إن كان لديك بعد المقابلة أي استفسار، أو سؤال، أو في حال رغبت بمعرفة النتائج والاطلاع عليها بإمكانك الاتصال على الباحث وفق الأرقام الموجودة أدناه.

أيمن عبادي

جوال: 0598010770

Appendix (C)

نموذج موافقة على المشاركة في الدراسة

الاسم:

لقد تلقيت المعلومات المكتوبة والكلامية حول الدراسة التي ستكون حول التجربة الحياتية لمرضى شرايين القلب بعد عمليات ترقيع الشرايين التاجية في فلسطين - الضفة الغربية، وأوافق على المشاركة بالدراسة بشكل طوعي، وقد تم إخباري أنه بإمكانني الانسحاب من الدراسة في أي وقت دون إعطاء أي أسباب.

التاريخ

التوقيع:

Appendix (D)

Study's Tables

Table 2

Structural analysis of the data

Units of meaning: “What is said/what is observed “	Unit of significance: “What is being talked about/ what the observation is about”	Subthemes	Theme
P10: “Really, I knew I had problems in my vessels. I wasn't surprised and expected the surgery .” P12: “it was normal and I was happy and joyful (thank god) I wasn't afraid”	The patients expected that the surgery was essential. So, the reaction was normal	Normal reaction towards the surgery event	Various reactions toward the surgery event
P14: “I was terrified, but when the individual is sick, he seeks help.”	Fear to undergo the surgery	Fear from the surgery	
P2: “I was surprised because I had no history of illness or heart disease. The occurrence was unexpected and developed rapidly.” P3 “I didn't think it would get to open-heart surgery.” P6:”I didn't expect that my condition will need an open-heart surgery.” P20: “I was really surprised when the doctor told me that I have to undergo an open-heart surgery because I don't have any information about this surgery.”	The new was surprising	Surprise from the surgery event	
P3: “I was a little bit shocked then I adapted.” P10: “My reaction was that I got shocked. Since I am just 42 years old and have never had any	The event was really shocking	Shocked from the surgery event	

previous diseases, it was a shock to me and my family.”			
P11: “I was really hesitant to go through the surgery because open-heart surgery is such a huge operation.”	Feeling hesitant toward the surgery	Hesitation to undergo the surgery	
P3: “I have a deep faith in God.”	Acceptance and adaptation with the event	Adaptation to the surgery event	
P13: “In the end, I accepted because the doctor explained the importance of the surgery for me.”			
P2: “Really, the pain prevented me from doing my daily life activities smoothly and I have difficulties driving my car for long periods of time.”	The condition post-surgery restricted their daily life activities	Restricted daily life activities post CABG	Restricted life post CABG
P3: “At first, my movement was limited and I couldn’t carry heavy objects.”			
P19: “After my discharge to home, the doctor advised me to rest totally and I couldn’t bind while praying. As a result, I began to pray in the chair. I had trouble putting on my clothes as well.”			
P2: “In terms of sleeping, the doctor advised me to sleep on my back for 3 months. Yesterday, I awoke twice because I discovered I was sleeping on my side, which increased the pain of the wound.”	It was very hard for patients to keep sleeping on the back, so they had difficulties to maintain their sleep.	Difficulties in maintaining sleep post CABG	
P14: “After the surgery, my daughters helped me in my work at home.”	After the surgery patients need help from others to carry out simple things	Dependency on others post CABG	
P6: “The wound is still fresh; you need help from your family in wearing your cloths			

and doing simple things.”			
P3: “Mainly, I should avoid fat in my diet and eat white meat, soups and vegetables.”	Restricting fat intake and salt in the patients’ diet	Restricted diet post CABG	
P14: “The doctor advised me to avoid fat, lamb meat and fried food in my diet.”			
P3: “The doctor advised me to quit smoking, and I committed.”	Smoking is harmful for cardiac disease patients and they should stay away from it	Quitting smoking post CABG	
P12: “Nothing, I sit with people normally, even without a mask, and I actually stay away from large gatherings.”	Life went on normally with decreased socialization	Normal life during COVID-19 pandemic	The effects of Living with corona virus (COVID-19) on CABG patients
P4: “Thank God, I stay away from socialization, I sit in my garden and even sleep there, and I contact people through massages.”	Restricted socialization and contact with people	Restricted social life due to COVID-19 pandemic	
P7: “Because of corona Virus, I must wear a mask, and this makes me feel tired and short of breath .”	Wearing the mask is uncomfortable for patients after open-heart surgery	Uncomfortable life because of COVID-19 pandemic	
P10: “I am really scared. I afraid of socialization. I have to wake up earlier to go to work, and I wear double masks too. I am really scared .”	The wide spread of coronavirus and its effect on open-heart patients make them feel scared	Fear of COVID-19 virus	
P17: I had been infected with coronavirus, which was transmitted to me by my wife. Although my body has been free of corona virus for 22 days, I still suffer from chest infection and I am taking medications and analgesics, as well as hopping from one hospital to another, which is truly harmful.	Coronavirus affected the lungs badly even after being cured, especially for open-heart patients	Being infected with COVID-19	
P15: “Thanks God, I	After the surgery, the	Feeling like a new	Post CABG

was so glad, I felt like I was a new person.”	patients felt that they were given a new life	person	psychological effects
P21: “No, my psychological status is not affected, I am strong and don’t fear anything, and I have a strong faith in God.”	The psychological status was not affected	Feeling psychologically normal	
P2: “I despise sleeping, and I despise the night as well; I think it's too long.”	Patients suffer from Insomnia and nightmares, especially in the first days after the surgery	Suffering from nightmares and insomnia	
P11: “ Sleeping was almost non-existent for the first 10 days following the surgery, then it became limited, and it has now improved.”			
P6: “I have trouble staying asleep; I sleep for 5-6 hours but wake up frequently through the night.”			
P7:”In the first stage after the surgery, I experienced a great deal of negative feelings at night, and I developed nightmares that began after discharge to home and lasted for one month, then it dispersed”.			
P14: “At first, I was nervous, I get angry from everything.”	Patients feel nervous post-surgery	Nervousness	
P3: I was isolated after the surgery, because the doctor advised me to limit contact with people, due to the fact that my immune system is weak due to the surgery, and I am committed, as is my family, so I feel lonely.	Patients feel isolated post CABG	Feelings of isolation	
P4: “Before the surgery, I was complaining of vomiting, but now I am not.”	Patients physical health has improved post the surgery	Physical improvement	Post CABG physical changes
P5: “Yes, the surgery improved my health,			

and now I can go upstairs and feel the difference.”

P6: “Before the operation, I was complaining of shortness of breath, I couldn’t keep walking for more than 2 meters. Now all of this has improved, and no shortness of breath is there any longer.”

P8: “Chest pain improved and got resolved now.”

P13: I still have pain in the site of the surgery in my chest and leg too, and I still have general pain and muscle cramps in my arm, chest and muscles. This continued for more than 20 days after the surgery, and sometimes it happens even now.

Pain in the surgical site and muscle cramps

P4: “I had numbness in my leg.”

Numbness in the site of the leg wound

P7: “After the surgery, I developed itching in my chest, and it's still happened now.”

Itching in the site of the wound

P9: I put on approximately 11 kg after the surgery. My belly is obvious now and my appetite got better may be due to the sedentary life these days. Actually, I used to go work from morning to sunset, and now I stopped going.

Developing body weight changes after the surgery

Changes in body weight

P17: I developed weight loss when I was in the hospital. I developed loss of appetite, and anemia. Now my appetite is better and my weight is rising. Actually, before the surgery I

was 90 kg and now I am 85 kg.		
P17: "My blood sugar was irregular inside the hospital due to medications and fluids, but at home it became stable in the range between 100-140."	Blood sugar irregularity at the hospital	Blood sugar irregularities
P15: "I was complaining of shortness of breath. While walking in slops, I rest for a while before continuing."	Shortness of breath while walking	Shortness of breath
P9: After 2 weeks of the surgery, I developed water around my lungs, as my doctor stated in the clinic visit. Thus, he withdrawn around 1 bag from my chest and gave me a spirometer. I worked hard on the spirometer and on the 2 nd visit, he told me that my chest is dry now.	Plural effusion are common post cardiac surgeries	Plural effusion Complications post CABG
P8: After 2 weeks of the surgery, I developed water in my lungs with few symptoms; my doctor took an image of my lungs and informed me that I have water in my lung tissue. I was given a spirometer and some medications, and it was resolved.	Some patient after the surgery developed pulmonary edema	Pulmonary edema
P11: "Because I was sleeping on my back, I developed bed sores. It started in the hospital and continued at home."	Some patients developed bed sores due to sleeping on their back	Bed sores
P17: After being admitted to the intensive care unit, my wound was opened in the open ward where the doctor took a swap culture from my	Open wound and wound infection	Wound infections

<p>wound. After that , he informed me that I have bacteria in the wound. So he advised me to stay at the hospital for another 14 days. During that time, I was required to do daily dressing. Then, they repeated the culture and the doctor stated that there was no bacteria any longer.</p>		
<p>P17: “I got constipation in the hospital and couldn't pass stool for 25 days. My abdomen will distend if I eat or drink anything.”</p>	<p>Some patient developed constipation and abdominal distention after operation</p>	<p>Constipation</p>
<p>P17: “I couldn't pass urine after the foley catheter was removed.”</p>	<p>urine retention and dysuria are common after the removal of the foley catheter</p>	<p>Urinary retention and dysuria</p>
<p>P20: One day after the operation, I developed cardiac arrest. I woke up while they were resuscitating me and the doctor gave me an electrical shock. I stayed in the intensive care unit for 6 days before being discharged to my home.</p>	<p>cardiac arrest was developed one day post the operation</p>	<p>Cardiac arrest and arrhythmias</p>
<p>P17: “I developed swelling in my right leg due to immobilization for a period of time, and the fact that the doctor took the vein from my right leg.”</p>	<p>Leg swelling are common in the patients post the surgery especially in leg that the vein was harvested from</p>	<p>Leg swelling</p>
<p>P2: “My family and friends always were beside me. My son came from Saud Arabia to support me.”</p>	<p>Family members, friends, neighbors and relatives are support groups</p>	<p>Family and friends as a support group for CABG patients</p>
<p>P3: “My friends, my wife, my neighbors, relatives and my mom. All of them supported me.”</p>		
<p>P3: Visiting the</p>	<p>Nurses and doctors</p>	<p>Healthcare</p>

<p>cardiac unit exceeded my expectations in terms of nursing experience, politeness, and the level of care provided.</p>	<p>support and monitor the patients continuously</p>	<p>providers as a support group for CABG patients</p>	
<p>Furthermore, the doctor kept in touch with me after the surgery on a regular basis. They all kept an eye on me and supported me during hospitalization and clinic visit as well.</p>			
<p>P17: “Really, I haven’t seen any healthcare system like this. The doctors, nurses, workers and cleaners were working in an integrative way.”</p>	<p>The healthcare system is perfect and integrated</p>	<p>The healthcare system was integrative</p>	<p>CABG patients’ perspectives on the Palestinian healthcare system</p>
<p>P21: “I didn’t face any difficulties in entering the healthcare centers. I was admitted smoothly and directly. Everything was perfect and facilitated starting from the insurance to the financial issues to the approach.”</p>			
<p>P2: It is not perfect but it is adequate. In fact, some healthcare providers treat with patients well, while others do not. According to finance, especially in private hospitals, they don’t take care of you without payment, but in general, the healthcare system is good with doctors and nurses doing their job well.</p>	<p>The healthcare system is good in general with some limitations including some procedures, financial issues, difficulties to approach the cardiac centers, the absence of psychological follow up, a shortage of healthcare providers, and a lack of health education</p>	<p>The healthcare system was acceptable with some limitations</p>	
<p>P1: “The healthcare system is good, but in my city, there is lack of cardiac centers and I have to travel to another city which is</p>			

too far.”

P2: Our healthcare system is good and provides perfect physical care for us post-surgery, but it is limited from a psychological and mental aspect, and I think that mental and psychological status post open-heart surgery are more important to care about.

P20: “I believe there is a shortage of healthcare providers.”

P12: “Everything is fine, but health education is limited in our healthcare system and it is very important for primary prevention.”

P7: “No, I didn’t feel that it had an impact on my financial situation. I have a financial coverage of 95%, so I only had to pay a small amount of money in comparison to what the government paid for me.”

The insurance and financial coverage facilitate the financial issues

Not affected financially by CABG

The financial effects of the surgery on CABG patients

P3: Really, it affected me financially. I work for a private company and that means I don’t have the right to take leaves at the expense of my company, and now I stopped working for a period of time due to my health condition. I have no source of income now.

After the surgery, patients need rest, so some of them had to stop working for a period of time and that affected them financially

Stopped working because of CABG

P17: “Yes, it affected me badly, I spent all I had, and there were many expenses to be paid during staying in the hospital from food to transportation.”

There are a lot of expenses to be paid during hospitalization and after discharge

Large expenses because of CABG

Table 3*Themes and subthemes of the study*

Themes	Sub themes
1. Various reactions toward the surgery event.	<ol style="list-style-type: none"> 1. Normal reaction towards the surgery event 2. Fear from the surgery 3. Surprise from the surgery event 4. Shocked from the surgery event 5. Hesitation to undergo the surgery 6. Adaptation to the surgery event
2. Restricted life post CABG	<ol style="list-style-type: none"> 1. Restricted daily life activities post CABG 2. Difficulties in maintaining sleep post CABG 3. Dependency on others post CABG 4. Restricted diet post CABG 5. Quitting smoking post CABG
3. The effects of Living with corona virus (COVID-19) on CABG patients	<ol style="list-style-type: none"> 1. Normal life during COVID-19 pandemic 2. Restricted social life due to COVID-19 pandemic 3. Uncomfortable life because of COVID-19 pandemic 4. Fear of COVID-19 virus 5. Being infected with COVID-19
4. Post CABG psychological effects	<ol style="list-style-type: none"> 1. Feeling like a new person 2. Feeling psychologically normal 3. Suffering from nightmares and insomnia 4. Nervousness 5. Feelings of isolation
5. Post CABG physical changes	<ol style="list-style-type: none"> 1. Physical improvement 2. Pain 3. Numbness 4. Itching 5. Changes in body weight 6. Blood sugar irregularities 7. Shortness of breath
6. Complications post CABG	<ol style="list-style-type: none"> 1. Plural effusion 2. Pulmonary edema 3. Bed sores 4. Wound infections 5. Constipation 6. Urine retention and dysuria 7. Cardiac arrest and arrhythmias 8. Leg swelling
7. Support groups for CABG patients	<ol style="list-style-type: none"> 1. Family and friends as a support group for CABG patients 2. Healthcare providers as a support group for CABG patients
8. CABG patients' perspectives on the Palestinian healthcare system	<ol style="list-style-type: none"> 1. The healthcare system was integrative 2. The healthcare system was acceptable with some limitations
9. The financial effects of the surgery on CABG patients	<ol style="list-style-type: none"> 1. Not affected financially by CABG 2. Stopped working because of CABG 3. Large expenses because of CABG



جامعة النجاح الوطنية
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تجربة مرضى عمليات القلب المفتوح في الضفة الغربية - فلسطين:
دراسة تفسير ظاهرة

إعداد

أيمن عبادي

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د. عدنان السرحان

قدمت هذه الرسالة استكمالاً لمتطلبات الحصول علي درجة الماجستير في برنامج تريض العناية المكثفة، من كلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس - فلسطين.

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الملخص

مقدمة: أصبحت عمليات ترقيع الشرايين التاجية شائعة جدًا لعلاج مرضى نقص تروية القلب. في الحقيقة، يعتبر مرض نقص تروية القلب من الأمراض الشائعة والخطيرة التي تصيب الناس في جميع أنحاء العالم. فإذا لم يتم التعامل معها بشكل صحيح وسريع، سيترتب عليها عواقب وخيمة. ولذلك كان الهدف الرئيسي للدراسة استكشاف التجربة الحياتية التي عاشها مرضى نقص تروية القلب الذين خضعوا لعملية ترقيع الشرايين التاجية في فلسطين.

التصميم: تم استخدام التصميم النوعي للظواهر التأويلية لإجراء هذه الدراسة، حيث أنها تصف وتفسر تجربة المشاركين بشكل عميق. تم إجراء مقابلات مع 21 مشاركًا وجرى تحليلها باستخدام نموذج ريكور للتحليل.

النتائج: أظهرت النتائج أن ردود فعل المرضى تجاه الجراحة كانت متباينة. وقد عانوا من قيود عديدة على أنشطة حياتهم اليومية بعد الجراحة، وكان لفيروس كورونا تأثيرًا على حياتهم، حيث كانوا يخافون الإصابة. وتعرض المرضى أيضًا لتغيرات جسدية ونفسية، والعديد من المضاعفات مثل الانصباب الجنبي والسكتة القلبية. كما كان للعملية بعض الآثار المالية على حياة المرضى.

وأخيرًا، سلطت الدراسة الضوء على المجموعات الداعمة لمرضى شرايين القلب وآراء المرضى بخصوص النظام الصحي الفلسطيني.

الخلاصة: كشفت النتائج أن مرضى ترقيع الشرايين التاجية عانوا من تغيرات جسدية ونفسية ومالية بعد العملية. وقد واجهوا العديد من المضاعفات المتعلقة بالجراحة؛ وبالتالي، فهم بحاجة إلى دعم من الحكومة والمجتمع ومقدمي الرعاية الصحية لتلبية احتياجاتهم وتحسين نوعية حياتهم.

الكلمات المفتاحية: أمراض نقص تروية القلب، الشريان التاجي، عملية ترقيع الشرايين التاجية التجربة الحياتية، التأويل.