

Exploring the Provision of Sexual Health Education for Adults with Acute Coronary Syndrome
in Cardiac Rehabilitation Programs

by

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A Thesis submitted to the Faculty of Graduate Studies of
The University of Manitoba
in partial fulfilment of the requirements of the degree of

MASTER OF NURSING

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Abstract

Annually, acute coronary syndrome (ACS) is diagnosed in 63,000 Canadians, and 73% survive. Although practice guidelines and scientific statements clearly identify the importance of providing sexual health education to ACS survivors, it is not routinely provided. By not including sexual health education to ACS survivors, this patient population may experience higher rates of fear, depression, and anxiety. There is a paucity of research literature about the successful provision of sexual health education post-ACS. The purpose of this thesis was to provide an overview of the current state of the literature related to sexual health education to inform health care providers about factors shaping sexual health education for ACS survivors and explore healthcare providers' experiences providing sexual health education to ACS survivors. A scoping review was completed, which identified the limited provision of sexual health education along with macro, meso, and micro-level factors influencing the provision of sexual health education. A gap in the literature was noted related to the lack of use of a sex positive lens when investigating the provision of sexual health education to ACS survivors. An interpretive descriptive study was then completed using a strengths-based approach and guided by sex positivity. Semi-structured, digitally recorded interviews were conducted with eight healthcare providers, half of whom were nurses. Additional data sources were a sociodemographic form and a reflective journal. Data were analysed using open, axial, then selective coding and constant comparative analysis. Key barriers and facilitators were identified and categorized according to sex and sexuality, the individual, and the institution. The findings may offer effective strategies to healthcare providers for use in their practice and provide a foundation to revisit and revise policy and programs in cardiac rehabilitation. Successfully providing sexual health education may reduce fear, depression, and anxiety as well as increase

the return to sexual activity among ACS survivors. Ultimately, consciously providing sexual health education to ACS survivors may improve their quality of life.

Acknowledgements

It takes a village not only to raise a child but also to support a graduate student. I would like to acknowledge the people of my village. I will be eternally grateful to my advisor, Dr. Donna Martin. From our first FaceTime meeting to the late night and weekend email responses to our regular meetings, you have been my rock and cheerleader. You are able to be supportive of my thoughts while simultaneously challenging me to think deeper and improve. Your encouragement and confidence in me built my confidence as a graduate student and have been integral to my success. I will be forever grateful to know you as an advisor, an academic, a peer, a co-author, and a friend.

To my internal committee member, Dr. Kendra Rieger, thank you for your thoughtful feedback that greatly strengthened this entire thesis. Your attention to detail and expertise in both scoping reviews and qualitative research have strengthened this work and my learning. You have succeeded in ensuring our relationship is one of reciprocal mentorship and have forever changed my concept of a learning environment.

To my external committee member, Dr. Reece Malone, thank you for your patience and your generosity with your time. Thank you for sharing your expertise and for challenging me to expand my definitions of the concept of sexual health. Your ability to provide supportive feedback that simultaneously challenges my thinking helped to shape the findings of this thesis.

I will be forever grateful to the Manitoba Centre for Nursing and Health Research for the support I received, from reviewing and providing feedback on ethics and grant applications to assistance with audio recorders. I am also grateful to the College of Nursing for building a collaborative, supportive environment that truly wishes success for students. My fellow students were key to my success and I wish to thank Amie Zaborniak, Stephanie Van Haute, Courtney

Teetaert, and Andrea Klippenstein specifically for always being there to prop me up when I needed support or to celebrate successes and milestones with me. I also found this support within the Cardiac Sciences Program. To Reid Love, thank you for allowing me the flexibility to pursue this degree. Karen Thronson, Christina Kuttig, Karen Coupland, Belinda Landry, Sandy Warren, Dan Quinn, Rosanne Labossiere-Gee, and so many others, thank you for your support and encouragement during this journey.

This thesis would not be possible without the financial support I received: the Margaret Elder Hart Graduate Study Award, the Canadian Nurses Foundation Helen Glass Manitoba Nurses Award, the Research Manitoba Master's Studentship, the Irene Nordwich Graduate Scholarship, and the Graduate Nursing Student Association Scholarship.

This thesis would also not be possible without the research participants who generously volunteered their time and shared their experiences with me. Their enthusiasm in volunteering to participate speaks to their passion for their patients and their desire to provide exceptional care. I will be forever grateful that they were so generous with their time and their words.

My final acknowledgements are for my family. Chris Hyde, thank you for your patience while I both worked and attended school full time. Thank you for ensuring balance in our lives during this journey. Thank you for knowing when to make me laugh and when to leave me to write. Thank you for your encouragement, proofreading, nicknames, and interest in my studies. The pride you have in me is a constant source of confidence for me. To my parents, thank you for always expecting excellence of me. You have always modelled and encouraged hard work and have been supportive of my every choice, from universities to where to live. I would not be the person I am without the morals and values you instilled in me.

Dedication

To those with the courage to stand up and speak about what society silences.

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Chapter One

Introduction to the Paper-Based Thesis

Sexual health education has been recommended for acute coronary syndrome (ACS) survivors along with education related to nutrition, medications, risk factors, and symptoms (Amsterdam et al., 2014; Levine et al., 2012; O’Gara et al., 2013). Despite these recommendations, and while patient education related to nutrition, medications, risk factors, and symptoms are frequently included in cardiac rehabilitation programs (CRPs), patient education related to sexual activity has not been routinely included (Ghisi, Abdallah, Grace, Thomas, & Oh, 2014). Indeed, less than half of ACS survivors reported receiving any sexual health education (Akdolun & Terakye, 2001; Brännström et al., 2014; Crumlish, 2004; Masur, 1979; E. Steinke & Patterson-Midgley, 1996; Thylén & Brännström, 2015).

This lack of education may be one component linked to ACS survivors’ hesitation to return to sexual activity. Survivors of ACS reported a reduction in sexual activity ranging from 13% to 75% (Akdolun & Terakye, 2001; Drory, Kravetz, & Weingarten, 2000; Eyada & Atwa, 2007; Klein, Bar-on, Klein, & Benbenishty, 2007; Lindau et al., 2012, 2014; E. E. Steinke, Mosack, Hertzog, & Wright, 2013; Wiklund, Vedint, & Wilhelmsson, 1984; Zeydi et al., 2016). This lack of sexual activity may be linked to fear. Post-ACS, patients indicated being fearful of engaging in any physical activity (Wiklund et al., 1984). This fear extended to sexual activity, as patients and partners reported not returning to sexual activity due to fear of having another ACS event (Abramsohn et al., 2013; AltIok & Yilmaz, 2011; E. E. Steinke, Jaarsma, et al., 2013). Several psychological symptoms were associated with a lack of sexual activity among ACS survivors. Depression and anxiety were found to be more prevalent when sexual activity was less

frequent or absent (Eyada & Atwa, 2007; E. E. Steinke, Jaarsma, et al., 2013; Wiklund et al., 1984).

The provision of sexual health education to ACS survivors was the focus of this study. In this introduction to the paper-based thesis, I provide a brief overview and background about sexual health education with survivors of ACS to form a backdrop for the statement of the research problem. I describe the guiding frameworks for both the scoping review and the qualitative research study and then provide the research purpose and objectives. I describe the research design used to achieve the research purpose and objectives. I also present the organization of the paper-based thesis and address the authorship of the two papers. This introduction concludes with a discussion about the significance of the study.

Definitions of Common Constructs

In the section below, I provide definitions of common constructs related to sexuality. The rationale for presenting these definitions is to ensure a shared understanding of concepts key to this thesis and to begin to explore the complexities of terms that may be commonly used and misunderstood. I will discuss how the definitions of the common constructs tie into the thesis as a whole. These definitions will be used throughout the thesis in Paper #1 and Paper #2.

Sexual Health

The World Health Organization's (2006) definition of sexual health was used in the scoping review and qualitative study. The World Health Organization defined sexual health as:

A state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion,

discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled (World Health Organization, 2006, p. 5).

Sexuality

In the scoping review and qualitative study, I used the World Health Organization's (2006) definition of sexuality:

A central aspect of being human throughout life. It encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors (World Health Organization, 2006, p. 5).

These definitions were chosen as they reflected a sex positive viewpoint. For more information on sex positivity, please see page 14. The definition of sexuality noted that not all dimensions of sexuality are always expressed (World Health Organization, 2006), which is important throughout life, illness, and wellness. This definition of sexuality requires the acknowledgment that someone retains their sexuality and has sexual health needs, even if not engaging in physical acts (World Health Organization, 2006).

Sexual Activity

Sexual activity can be defined as a spectrum of sexual behaviours engaged in solo or with one or more partners and is an important component of human existence (Katz, 2009). These behaviours can range from kissing and fondling, to oral sexual intercourse, to vaginal or

anal penetration. Sexual activity is the way humans express their sexuality and is a part of each person's identity (Katz, 2009).

Background: Current Evidence about Sexual Health Education in Cardiac Rehabilitation Programs

Heart disease is a leading cause of hospitalization on a global, national, and provincial scale. Globally in 2015, heart disease caused 45% of all non-communicable deaths (Public Health Agency of Canada, 2018). In Canada in 2016-2017, heart disease was the third leading cause of hospitalization of Canadians of all ages, behind giving birth and chronic obstructive pulmonary disease (COPD)/ bronchitis (Canadian Institute for Health Information, 2018). Heart disease was the fifth leading cause of hospitalization in Canadians aged 18-64 years, and the second leading cause of hospitalization in Canadians aged over 65 years (Canadian Institute for Health Information, 2018). In Manitoba in 2016-17, heart disease was the fifth leading cause of hospitalization for residents of all ages, accounting for 2.2% of all hospitalizations (Canadian Institute for Health Information, 2018). In comparison, 14.6% of all hospitalizations were related to giving birth, 2.5% for COPD/ bronchitis, 2.4% related to convalescence after a treatment or procedure, and 2.3% for pneumonia (Canadian Institute for Health Information, 2018).

Heart disease, also referred to as ischemic heart disease, is defined as “a condition which the heart muscle is damaged or does not function properly” (Public Health Agency of Canada, 2018, p. 4). Heart muscle can become damaged when atherosclerotic plaques made up of substances including cholesterol, lipids, and calcium build up on the walls of the arteries that feed the heart muscle, the coronary arteries (Libby & Theroux, 2005; Public Health Agency of Canada, 2018). These plaques can grow over time and cause the coronary arteries to narrow which reduces the flow of oxygen-rich blood to the heart muscle or they can rupture and cause a

sudden reduction or cessation in oxygen-rich blood flow to cardiac tissue (Libby & Theroux, 2005; O’Gara et al., 2013; Public Health Agency of Canada, 2018). The former is referred to as stable angina, and the latter is referred to as ACS (Amsterdam et al., 2014; Libby & Theroux, 2005). Acute coronary syndrome encompasses acute myocardial ischemia or infarction along a continuum, from non-ST-elevated ACS, which includes both unstable angina and non-ST-elevated myocardial infarction, to ST-elevated myocardial infarction (Amsterdam et al., 2014; O’Gara et al., 2013). In 2012-2013, 2.4 million Canadians aged 20 years and older were reported to be living with ischemic heart disease (Public Health Agency of Canada, 2017b) and 578 000 Canadians reported living with a history of ACS (Public Health Agency of Canada, 2017a).

The median age of Canadians has increased by 10 years since 1984, when it was 30.6 years, to 40.6 in 2017 (Statistics Canada, 2018). The baby boomer generation is now between 51 and 71 years of age (Statistics Canada, 2018), which means that the number of Canadians who are at the ages of the highest prevalence of ACS will continue to grow as the baby boomer generation ages.

Treatment of ACS has improved with a mortality rate of 27% (Fitchett et al., 2011). This improvement translates to mean that 73% of patients with ACS are discharged home (Fitchett et al., 2011). The majority of survivors of ACS have families and lives to return to, and education has been an important aspect of adjusting to life post-ACS (Amsterdam et al., 2014; Fitchett et al., 2011). Patient education is defined as information provided by healthcare providers to patients that will improve the health status of the patient by changing their health behaviours (Anderson et al., 2017). The provision of patient education related to the plan of care, recognition and management of symptoms, risk assessment, and prognosis has been included in guidelines for the management of ACS survivors with the goal of increasing understanding and

effecting behaviour change (Amsterdam et al., 2014; O’Gara et al., 2013). Typically, the plan of care for patients who survive ACS included understanding their medication regimen, smoking cessation, physical activity, dietary changes, management of comorbidities such as hypertension, cholesterol, and diabetes (Amsterdam et al., 2014; O’Gara et al., 2013), all of which require patient education.

Referral to CRPs has been advisable for all ACS survivors (Amsterdam et al., 2014; O’Gara et al., 2013) as these interventions target risk factors for cardiovascular disease by providing education, risk factor/ lifestyle modification, and exercise (Amsterdam et al., 2014; Anderson et al., 2017; Kabboul et al., 2018). According to a recent systematic review, the characteristics of patient education in CRPs vary greatly, including the type of healthcare provider providing the education, the delivery format, the intensity, and the mean number of education sessions (Ghisi et al., 2014). Over one third of studies noted that the healthcare providers delivering education in CRPs were nurses, one third was a multidisciplinary team, and the remaining studies noted education provided by dietitians or cardiologists (Ghisi et al., 2014). Group education via lectures or group discussion and individual counselling dominated the studies, with some programs offering both group and individual education and some studies noting group or individual education (Ghisi et al., 2014). Telephone follow up, question and answer periods, and home visits were found to be less common and only one study noted the use of computer-based learning (Ghisi et al., 2014). The intensity of delivery of education was found to range from five minutes to full-day sessions (Ghisi et al., 2014). The number of sessions ranged from one to 24 and the frequency from daily to every six months (Ghisi et al., 2014). Despite this variability in characteristics of CRPs, 91% of the studies that assessed patient

knowledge noted a significant increase in patient knowledge associated with patient education (Ghisi et al., 2014).

Improvement in patient knowledge translated to health behaviour change as well (Ghisi et al., 2014). A significantly positive relationship was found between patient education and physical activity (77%), diet (84%), smoking cessation (65%), response to symptoms (50%), and psychosocial wellbeing (43%) (Ghisi et al., 2014). Patient education was effective in improving both knowledge and health behaviours in ACS survivors who attended CRP (Ghisi et al., 2014).

Statement of the Research Problem

Nearly three-quarters of patients survive ACS and these survivors require patient education to adjust to life post-ACS. While patient education related to nutrition, medications, risk factors, and symptoms has been included in CRPs, patient education related to sexual health was not routinely provided (Ghisi et al., 2014). Of the 42 studies of CRPs, only one included patient education about sexual health (Ghisi et al., 2014). Yet, guidelines for the management of ACS state that sexual health education should be included in patient education for post-ACS patients (Amsterdam et al., 2014; O’Gara et al., 2013). There is an international consensus statement related to the provision of sexual health education to patients with cardiovascular disease and their partners (E. E. Steinke, Jaarsma, et al., 2013). There is also a scientific statement from the American Heart Association related to sexual health and cardiovascular disease (Levine et al., 2012). Despite these recommendations and statements, the majority of post-ACS patients reported that patient education related to sexual health was not provided (Akdolun & Terakye, 2001; Brännström et al., 2014; Crumlish, 2004; Masur, 1979; E. E. Steinke & Patterson-Midgley, 1996b; Thylén & Brännström, 2015).

The majority of the literature related to healthcare providers and the provision of sexual health education focused on deficits and why sexual health education was not delivered. A lack of knowledge (Barnason, Steinke, Mosack, & Wright, 2013; Briggs, 1994; D'Eath, Byrne, Doherty, McGee, & Murphy, 2013; Jaarsma et al., 2010; Malila, Lunkka, & Suhonen, 2017; Nicolai et al., 2013; Rahim, Allana, Steinke, Ali, & Khan, 2017; Shuman & Bohachick, 1987), lack of experience (Jaarsma et al., 2010; Kolbe, Kugler, Schnepp, & Jaarsma, 2016; Nicolai et al., 2013; Özdemir & Akdemir, 2008), and attitudes (Briggs, 1994; Crumlish, 2004; D'Eath et al., 2013; Goossens et al., 2011; Ivarsson, Fridlund, & Sjöberg, 2010; Jaarsma et al., 2010; Kolbe et al., 2016; Nicolai et al., 2013; Shuman & Bohachick, 1987; E. E. Steinke, Mosack, Barnason, & Wright, 2011; E. E. Steinke & Patterson-Midgley, 1998) have been highlighted as reasons that sexual health education was not provided. There is a paucity of research literature about the successful provision of sexual health education post-ACS. Please see Paper #1 for the peer-reviewed publication with results of a scoping review that was conducted to describe factors shaping the provision of sexual health education to survivors of ACS. The focus on the negative has not assisted in breaking down these barriers and improving the provision of sexual health education to ACS survivors. An approach to sexual health education exploring facilitators rather than barriers may address this gap in the literature and advance this body of knowledge.

Guiding Frameworks

Two frameworks guided this thesis, sex positivity and a strengths-based approach. In the following section, I describe these guiding frameworks.

Sex Positivity

I used the lens of sex positivity from inception to completion of the study. Sex positivity is an emerging concept but lacks a definitive definition (Ivanski & Kohut, 2017). Sex positivity

means that discussing sex or sexual health is no different from discussing any other topic (Williams, Prior, & Wegner, 2013). Sex positivity is defined as “ideology that promotes, with respect to gender and sexuality, being open-minded, non-judgemental and respectful of personal autonomy, given that there is consent” (Ivanski & Kohut, 2017, p. 223). Sex positivity sees sex as a normal way that creativity is displayed instead of only as a way to obtain infections and diseases (Burnes, Singh, & Witherspoon, 2017). A sex positive lens makes space for and allows, or even requires, researchers and healthcare providers to address sexual activity and sexual health in the same way they address medications and management of symptoms (Williams et al., 2013). Using this lens makes room for and removes any perceived barriers of, discussions of sexuality. Sex positivity is emerging as a popular perspective and its use in research is beginning to grow (Harden, 2014).

Arakawa, Flanders, Hatfield, and Heck (2013) reviewed American history and highlighted the sexual repression and emphasis on the negative outcomes of sexuality. They noted that we, as a society, have grown, as we “no longer think masturbation leads to death” (p. 308), and they discussed the positive psychology shift in the late 1990s (Arakawa, Flanders, Hatfield, & Heck, 2013). This shift altered the focus from weakness and deficits to strength and capacity (Arakawa et al., 2013), and this can be applied to not only psychology but also sexual health. Sex positivity shifts the discussion of sexual health from one that explores the negative to one that explores the positive. A sex positive lens can be thought of as a strengths-based approach tailored for sexual health.

Strengths-Based Approach

I approached the research purpose and objectives using a strengths-based approach. A strengths-based approach is rooted in positive psychology (Schueller, 2000; Seligman &

Csikszentmihalyi, 2000) and involves investigating what is done well to allow amplification and fostering of what is working (Harvey, 2014; Schueller, 2000; Seligman & Csikszentmihalyi, 2000). Deficits are not ignored, but instead, strengths are identified and ways to foster and use these strengths to overcome the deficits is the focus (Harvey, 2014). Strengths-based approaches are common in mental health and addictions work, social work, and organizational research but are not limited to these areas (Harvey, 2014).

A strengths-based approach may inform theory, research, and practice through three key principles (Harvey, 2014):

1. All individuals, groups, and organizations have strengths,
2. Researchers work collaboratively with these individuals, groups, and organizations,
3. An outcome of the research process is action that results in change.

From my perspective, a strengths-based approach complemented sex positivity. A sex positive lens can be thought of as a strengths-based approach tailored for sexual health. Instead of the focus on the negative and why sexual health education was not provided, a sex positive and strengths-based approach facilitated a focus on what has worked or might work to arm healthcare providers with tools to understand how to approach and effectively address this topic with patients.

Study Purpose and Research Objectives

The purpose of this thesis was to advance understanding of the provision of sexual health education to survivors of ACS. The objectives of this thesis were: 1) to review the existing literature related to factors shaping the provision of sexual health education for adults who have

survived ACS (paper one) and 2) to explore health care providers' experiences of providing sexual health education to ACS survivors in CRPs (paper two).

Research Design

The focus of this section is a description of the design and methods of the qualitative research study (paper two). The design and methods of the scoping review (paper one) are detailed in chapter 2. I used interpretive description (ID) to explore health care providers' perspectives of providing sexual health education to ACS survivors. Interpretive description was chosen because the second research objective was grounded in clinical practice and interpretive description values this experiential knowledge (Thorne, 2016). Interpretive description blends description using inductive reasoning and interpretation using constructivist thinking (Thorne, 2016). Studies guided by interpretive description are founded with questions which are grounded in clinical practice (Thorne, 2016).

Nursing and healthcare are applied disciplines, where knowledge is created to be applied to people to improve their quality of life (Thorne, 2016). Qualitative nursing research historically draws its methodologies from social sciences, borrowing ethnography from the anthropologists, grounded theory from sociologists, and phenomenology from psychologists (Thorne, 2016). While varying in their goals, methods, and questions, these methodologies require the researcher to hold steadfast to the rules or have the research be deemed sloppy or slurred (Thorne, 2016). Nursing recognized the value of participant observation and interviews in growing an understanding of a clinical question of interest, however, ethnographers did not value the limited view taken by these researchers and believed that, to be pure ethnography, the findings must be placed within the larger healthcare context (Thorne, 2016). Grounded theorists shared constant comparative analysis which assisted nursing researchers in identifying and understanding

patterns, which could be practically applied to patients (Thorne, 2016). If a theory was not produced by the researchers, however, this was an impure use of grounded theory (Thorne, 2016). Nursing is more than a profession or a discipline, it is a way of being, and as such, one cannot or does not wish to follow the requirement of phenomenologists and blind ourselves to our existing knowledge (Thorne, 2016). Thorne and others recognized these issues and she sought to create a methodology for nursing that “would extend beyond mere description and into the domain of the ‘so what’ that drives all applied disciplines” (Thorne, 2016, p. 36).

Interpretive description provides a justification for breaking the rules of the social sciences and using the aspects of methodologies in unique ways to answer clinically based questions (Thorne, 2016). By describing findings and interpreting them from a different perspective, knowledge can be created that both drives research and practice (Thorne, 2016). By calling this research interpretive description, one is able to defend the choices made and contribute defensible knowledge to the practice of nursing (Thorne, 2016).

The descriptive aspect of interpretive description utilizes inductive reasoning, moving from the specific to the general (Thorne, 2016). Interpretation grows from the assumption that there are many realities which are socially constructed (Thorne, 2016). Interpretive description follows the constructivist viewpoint that people’s experiences are shaped by their perspective, along with the cultural and social forces that exist (Thorne, 2016).

As noted above, interpretive description research questions are grounded in clinical practice (Thorne, 2016). The idea for this research study stemmed from my clinical practice as a registered nurse in an acute care hospital. After participating in a workshop on sexual health education at a conference, I reflected on how I have not provided sexual health education to patients. The spouse of one patient asked me about sexual health early in my career; however, I

was unable to provide an answer to the question. When I asked colleagues about their experiences of providing sexual health education, the lack of provision was reinforced with responses ranging from embarrassment, lack of knowledge, discomfort, to being provided with a lecture of what every patient needs to know. Interpretive description is a qualitative approach that allows the use of this clinical knowledge and does not require a researcher to blind themselves to their existing clinical knowledge (Thorne, 2016).

An interpretive description study must be scaffolded in two ways: first, with a literature review (please see Paper #1), and second, with the researcher locating themselves theoretically, disciplinarily, and personally (Thorne, 2016). The theoretical scaffolding of this study was previously described in the guiding frameworks section. This study was guided by sex positivity and a strengths-based approach. Both of these guiding frameworks are consistent with the constructivist viewpoint of interpretive description, that reality is created by an individual based on experiences and interpretations of experiences (Thorne, 2016).

Disciplinarily, this study is framed from a nursing viewpoint. Nursing is relational, grounded in the clinical, and works to benefit patients. The relational aspect of nursing was reflected in the chosen data collection method of interviews. Interviews are personal and relational and hence, fit the disciplinary aspect of an interpretive description study (Thorne, 2016). With respect to the personal scaffolding, I reflected upon my personal and professional experiences. As a nurse educator and advocate for quality of life and improving the health of Manitobans, I wanted to find ways to improve quality of life for patients. Biomedical research has identified interventions that provide improved survival rates (Fitchett et al., 2011) and with this study, I was focused on enhancing ACS survivors' quality of life.

Research Sites, Recruitment, and Sample

In the following section, I describe the research sites and sampling technique. The best timing of delivery of sexual health education has been previously investigated (Abramsohn et al., 2013; E. E. Steinke, Mosack, et al., 2013; E. E. Steinke & Swan, 2004; Timmins & Kaliszer, 2003), indicating that ACS survivors desire sexual health education after discharge from the hospital setting. One study found that patients want small amounts of information at discharge with more information available during follow-up care (Abramsohn et al., 2013). While patients were admitted to hospital, education about physical activity, including sexual activity, was not deemed to be as important as education about symptom management or medications (Timmins & Kaliszer, 2003). These findings were supported by a subsequent study that evaluated an educational video to patients (E. E. Steinke, Mosack, et al., 2013). The majority of participants reported watching the video three weeks after discharge from hospital (E. E. Steinke, Mosack, et al., 2013). Another study related to the same educational video reported that 87% of participants watched the video within one month of discharge from hospital with the majority of viewings occurring in the first week after discharge (E. E. Steinke & Swan, 2004).

These reports on the timing of delivery of sexual health education suggested that cardiac rehabilitation (CR) is the optimal venue and time for patients to enquire or engage in discussions related to sexual health. Cardiac rehabilitation programs usually begin two weeks from hospital discharge. Cardiac rehabilitation occurs at multiple sites in western Canadian provinces. Each CR site employs nurses, physiotherapists, and fitness professionals who interact with ACS survivors and have the opportunity to provide sexual health education.

A convenience sample was used as these CRPs were accessible (Thorne, 2016). A theoretical sample was not possible as the limited number of staff restricted the sample size, so

recruitment could not continue to maximize variation (Thorne, 2016). Purposive sampling was not possible due to the limited number of staff and diversity of roles at the CRPs (Thorne, 2016). Although healthcare providers not employed at the CRPs may have different experiences providing sexual health education to ACS survivors, this study focused on health care providers' experiences in CRPs. The sample size was guided by the concept of information power (Malterud, Siersma, & Guassora, 2016). Information power consists of the concepts of study aim, sample specificity, level of theoretical background, quality of dialogue, and analysis strategy (Malterud et al., 2016). The aim of this study was narrow, investigating a specific portion of the education provided to a specific patient sub-population of CR rather than all education provided to all patients attending CR (Malterud et al., 2016). A narrow aim reduces the required sample size (Malterud et al., 2016). A smaller sample is required with participants who have characteristics specific to the study aim (Malterud et al., 2016). The use of a convenience sample had the potential to reduce the specificity of the participants (Malterud et al., 2016), as participants volunteered who had minimal or very similar experiences providing sexual health education. The participants who volunteered for this study had diverse experiences providing sexual health education, which increased the information power and reduced the required sample size. A study with a strong level of theoretical background, such as the current study which utilized two theoretical perspectives for the development of the study and the analysis and discussion of the findings, require a smaller sample size (Malterud et al., 2016). This is because theory provides a foundation of existing knowledge with which the new findings can be synthesized (Malterud et al., 2016). Quality of dialogue refers to the interview and the co-construction of data (Malterud et al., 2016). Although this is a thesis completed by a student new to the research process, I am well versed in cardiac nursing and can speak the same language as

the participants. A more experienced researcher may be able to extract information through questioning and interview skills with a smaller sample size however the quality is a balance between knowledge of the interview content and interview process (Malterud et al., 2016). The analysis strategy for this thesis is cross-case, as the goal is to understand perceptions of providing sexual health education among a group of healthcare providers (Malterud et al., 2016).

Healthcare providers from each CRP were invited to participate by using an email invitation (see Appendix A). Although there were a relatively small number of healthcare providers employed at each CRP, I anticipated that I would be able to recruit enough participants to generate rich data. Inclusion criteria were a healthcare provider employed at a CRP. Interested healthcare providers were instructed to contact me directly via email or telephone.

Interviews

Following the acquisition of a signed informed consent (see Appendix B), a one-hour, semi-structured, digitally recorded interview was conducted at a location of the participant's choice. Locations included the participant's home, a private room at the University of Manitoba, at his/her respective CRP, or another private and secure location as interpretive description interviews are conducted in naturalistic settings (Thorne, 2016). Four interviews were conducted face to face, and four interviews were conducted using Skype.

Qualitative Data Sources: Transcripts and Reflective Journal

I used a semi-structured interview guide (see Appendix C) to facilitate the collection of rich data about CR healthcare providers' experiences facilitating (or not facilitating) sexual health education with survivors of ACS. The interview guide was developed using a strengths-based approach and sex positivity.

After the signing of an oath of confidentiality (see Appendix D), the recordings were transcribed verbatim by Transcript Heroes. Once the transcriptions were received, they were checked for accuracy by reading them while listening to the recordings. Any revisions required were made, including clarifying typos or questions and removing names and identifiers. Once accuracy was ensured, the digital recording was permanently deleted.

Another data source was my reflective journal; I documented my perceptions of the interview process with a focus on theoretical insights and methodological issues to facilitate the process of gathering and analysing data. This reflective journal highlighted pre-existing ideas to ensure these ideas were not being imposed on the data.

A final data source was the socio-demographic forms completed by the participants. Information collected on the socio-demographic forms included age, gender, occupation, years of experience in cardiac rehabilitation, knowledge level of sexual health post-ACS, and confidence level in providing sexual health education. This data assisted in the interpretation of findings and provided context for responses.

Data Analysis Plan

Concurrent data collection and analysis occurred to facilitate the evolution of the semi-structured interview guide (Thorne, 2016). The transcripts and reflective journal entries were analyzed using open, axial, then selective coding and constant comparative analysis (Thorne, 2016). Firstly, participant's transcript and reflective journal entries pertaining to that interview were read several times before coding began. Coding began with open coding in a line by line fashion (Thorne, 2016). The data was deconstructed to allow for understanding of basic concepts and how these are defined and categorized (Thorne, 2016). Initial codes were the participant's own words until there was a deeper understanding of the data. Axial coding followed to elucidate

interactions among categories, conditions that gave rise to these categories and the contexts the categories existed in (Thorne, 2016). Both existing data and ongoing data collection was used to confirm the axial coding. Open and axial coding occurred several times as data collection continued, and categories were developed. Lastly, I engaged in selective coding, where core categories were illuminated, interactions between subcategories were demonstrated, and a conceptual framework was developed that described the relationship among the themes.

Rather than trustworthiness, interpretive descriptions discuss the credibility of the research (Thorne, 2016). Thorne (2016) suggests the following criteria to evaluate credibility: epistemological integrity, representative credibility, analytic logic, and interpretive authority. Epistemological integrity occurs when the research question, data sources, and strategies align with the epistemological leaning of the study (Thorne, 2016). This study demonstrates epistemological integrity as the knowledge produced flows from the epistemological stance. This study reinforces existing knowledge and provides new insights; moreover, these new insights flow from the research question and the data. Representative credibility relates to the sample and the conclusions drawn (Thorne, 2016). This study has representative credibility as the findings discuss the provision of sexual health education by healthcare providers in CRPs and the source of the data is healthcare providers who work in CRPs. While multiple healthcare providers were interviewed, it would be inappropriate, and the study would lack representative credibility, to state that the findings of this study reflect the provision of all sexual health education by healthcare providers, regardless of location of practice. Analytic logic requires the researcher to transparently share the inductive reasoning process that lead to the results (Thorne, 2016). Analytic logic was reflected in memoing, which created an audit trail which allowed for reflection on coding decisions (Thorne, 2016). A reflective journal was also used to allow for

reflection on each interview and to document insights during coding. Finally, interpretive authority relates to how the researcher ensures that the interpretation of the findings is not lead astray by personal bias (Thorne, 2016). Interpretive authority was addressed by having my advisor and I independently analyzing, two key transcripts. Coding was then compared and contrasted to ensure trustworthiness of the findings. In the event that contrasting codes were identified, we discussed best strategies to move forward and decided to watch for similar or dissimilar codes in upcoming transcripts and the reflective journal.

Member checks were not completed as the participants may not agree with interpretations made (Thorne, 2016). Interpretive description values the researcher as an interpreter of the data and not as a megaphone to simply recite the words of the participants (Thorne, 2016). To ensure the participants benefit from this study, findings were shared with the participants by way of a report and future virtual seminar and through access to publications and thesis presentation.

Ethical Considerations

This study was approved by the University of Manitoba Research Ethics Board and the protocol was reviewed by two of the participating CRPs. Two amendments were submitted and approved by the University of Manitoba Research Ethics Board, one based on feedback from a participating site. The site noted the inclusion of the term “licensed healthcare provider” and shared that this restricted participation as several healthcare professions are not licensed in the western Canadian province. The second amendment removed the listing of specific CRPs to allow for more diversity in the CRPs involved in recruitment.

Recruitment occurred through a blind carbon copy invitational email sent on my behalf via an administrative assistant at the CRP. Notices of the study were also shared with the CRPs. I also offered to video chat or visit each site to discuss the purpose and nature of the study with

any healthcare provider who expressed interest in participating in or learning more about the study. Participants were asked to contact me using the contact information provided in the invitation email and on the posters to express and interest in participating in the study. I had no pre-existing relationship with any of the potential participants.

Participants reviewed and signed an informed consent form that reviewed the following details. A copy of the consent form can be found in Appendix B. Some potential risks or discomforts were associated with participation in this study. Some health care providers may have been uncomfortable discussing sexuality, sex, and sexual health and therefore, may have experienced mild emotional discomfort. Reflecting on the sexual health education provided (or not provided) may have caused mild to moderate emotional discomfort if the healthcare provider felt they could have been a more effective educator. In the event that a participant felt distressed, they were asked to share this with me, and we determined if they would like to stop the digital recording, take a break, continue the interview, or end the interview completely. All participants were provided information about resources to contact in the event that participation elicited discomfort or distress. Participation in this study was voluntary; therefore, healthcare providers with strong negative emotions or discomfort associated with sexuality, sexual identity, and sexual health education could have chosen not to participate in this study.

There were no known personal benefits to participating in this study. For some healthcare providers, sharing and talking about their experiences might help them to identify factors that shape sexual health education with ACS survivors. A \$25 Starbucks gift card was provided upon completion of the interview or when the participant decided to end the interview.

The transcriptionist signed an oath of confidentiality prior to receiving digital recordings. The transcriptionist and I were the only people to have access to the digital recording of the

interviews. I emailed the digital recording to the transcriptionist using the secure submission process of the transcription company. The transcriptionist emailed the transcript as a Word document to me. I removed all names and identifiable features and add the participant number to the file and saved it onto a password protected file on my personal, password protected laptop. The digital recordings were permanently deleted as soon as the transcripts were verified.

I removed all names and any identifying information (e.g. CR site) from the text of the transcripts and journal entries before beginning to review. I assigned a participant number to each transcript. I documented thoughts about the interview process in a reflective journal without using real names or identifying features. The reflective journal was assigned the same participant number as the corresponding transcript. As an example, I am the only research team member that is aware that Albert is participant #1, Bernice is participant #2, Connie is participant #3 etc. To remove identifying features, I revised the text within the document. For example, a participant may have been identifiable by their position as a physiotherapist; the text was reworded to reflect the participant's position as a healthcare provider. The demographics of the sample are presented in aggregate fashion. The research site was described as CR in a Western Canadian province rather than CR sites in a specific province as another strategy to protect the identity of the participants. Participant's names and professional designations (registered nurse, occupational therapist, dietitian) are not be used in the transcript or any other study documents.

I stored the socio-demographic form, master list of participant names, participant numbers, and signed consent forms in separate files a locked filing cabinet in my home office. Socio-demographic forms, master list of participant names, participant numbers, and consent forms will be shredded as per the University of Manitoba's policy for destruction of confidential

material in October 2026. All electronic data (Word documents) will be permanently deleted in October 2026.

Organization of the Paper-based Thesis

The paper-based thesis includes an introduction and conclusion, along with the required two manuscripts. Paper #1 is an open access peer-reviewed publication and reported the results of a scoping review of the literature. This work identified the gap in the literature and lead to the development of the research question. The second paper is a research-based manuscript that provides answers to the second research objective.

The authorship for the first paper included me as first author, my advisor, and my internal committee member. The authorship for the second paper will include me as first author along with the entire thesis committee.

Significance

This thesis advanced the understanding of the provision of sexual health education. The scoping review (Paper #1) clarified the underlying intersecting influences that require attention and investigation to promote the provision of sexual health education to ACS survivors as sexual health is an inherent right of all individuals (World Health Organization, 2006). The qualitative research study added to our understanding of the experiences of healthcare providers implementing sexual health education to survivors of ACS in CRPs. Exploring and sharing these experiences using a sex positive and strengths-based lens demonstrated the successes. These strategies may be used by other healthcare providers. Providing sexual health education is significant as education improves knowledge which translates to health behaviour changes (Ghisi et al., 2014). Survivors of ACS consistently reported not receiving education related to their sexual health (Akdolun & Terakye, 2001; Amsterdam et al., 2014; Brännström et al., 2014;

Crumlish, 2004; Masur, 1979; E. E. Steinke & Patterson-Midgley, 1996a; Thylén & Brännström, 2015). Using a strengths-based approach and sex positivity lens, the interpretive description study identified best practices and challenges in the provision of sexual health education to ACS survivors.

The burden of heart disease in Canada is high and will continue to grow (Public Health Agency of Canada, 2018; Statistics Canada, 2018), so enhancing our understanding of the experiences of healthcare providers implementing sexual health education may facilitate the successful integration of guideline-suggested education into healthcare practice. Successful integration of guideline-suggested education may reduce the fear that survivors have related to resuming sexual activity and lead to an increase the return to sexual activity. Returning to sexual activity may reduce the prevalence of depression and anxiety in ACS survivors and improve their quality of life.

Chapter Summary

This introductory chapter provided an overview of ACS, the need for sexual health education in CRPs, and a statement of the thesis purpose and objectives. The guiding frameworks of sex positivity and strengths-based approaches were outlined, along with a description of the research design. Then, I explained the organization of the paper-based thesis. Finally, the significance of the study was described. This chapter laid the groundwork for the thesis work and the two papers to follow. A conclusion chapter will follow the two papers as I weave together the body of work to form a single, coherent thesis document.

Chapter 2: Factors Shaping Sexual Health Education for Adults with Acute Coronary Syndrome: A Scoping Review

Chapter two is a scoping review of the literature. A scoping review can be undertaken to determine if there are gaps in the existing research literature (Arksey & O'Malley, 2005). Published findings are reviewed and conclusions can be drawn (Arksey & O'Malley, 2005). Scoping reviews do not include an assessment of the quality of the existing literature (Arksey & O'Malley, 2005). The purpose of this scoping review was to review the literature about factors shaping sexual health education for adult survivors of ACS.

This scoping review highlighted the macro, meso, and micro level factors that influence the provision of sexual health education to survivors of ACS. It also illuminates a gap in the literature. The located studies approached the practice of providing sexual health education from a deficit standpoint with a focus on lack of education (i.e. Barnason et al., 2013), a hospital environment that is not conducive to providing education (i.e. Barnason et al., 2013), lack of knowledge (i.e. Rahim et al., 2017), lack of sense of responsibility (i.e. Nicolai et al., 2013) and so forth. No located study asked health care providers about their experiences of providing sexual health education to ACS survivors to search for patterns of what is best practice. This review illuminated a gap in the literature, which was explored with the interpretive description research study.

The article, “Factors Shaping Sexual Health Education for Adults with Acute Coronary Syndrome: A Scoping Review”, has been published Gold Open Access with *Patient Education and Counseling*. The user license “allows users to copy and distribute the Article, provided this is not done for commercial purposes, and further does not permit distribution of the Article if it is changed or edited in any way, and provided the user gives appropriate credit (with a link to the

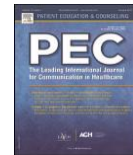
formal publication through the relevant DOI), provides a link to the license, and that the licensor is not represented as endorsing the use made of the work” (Elsevier, 2020). In accordance with this user license, the publisher’s PDF version of the scoping review was inserted into this paper-based thesis. The initial manuscript draft was written by the student and revised with her advisor and internal committee member, both of who provided constructive criticism of the initial draft, suggestions of organization of themes, and contributed written text to the revised manuscript.

The publication is available at : <https://doi.org/10.1016/j.pec.2019.11.017>.



Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Review Article

Factors shaping the provision of sexual health education for adults with acute coronary syndrome: A scoping review



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ARTICLE INFO

Article history:

Received 12 April 2019

Received in revised form 8 November 2019

Accepted 15 November 2019

Keywords:

Sexual health

Sexual wellbeing

Sexual activity

Education

Counseling

Post-myocardial infarction

Myocardial infarct

Acute coronary syndrome

Nurse

Healthcare provider

Healthcare professional

Sex positive

ABSTRACT

Objective: Each year, 63,000 Canadians are diagnosed with acute coronary syndrome (ACS) and 73 % survive. Sexual health education for ACS survivors is recommended but is not routinely provided. A scoping review was performed to inform health care providers about factors shaping sexual health education for ACS survivors.

Methods: Three databases were searched, 208 studies were screened, and 24 were included in this scoping review. Significant points from the selected studies were charted and synthesized.

Results: This review confirmed absent to limited provision of sexual health education to individuals with ACS. Key factors influencing lack of provision of sexual health were categorized according to macro, meso, and micro levels. At the macro level, societal and cultural factors were noted. The meso level included healthcare environment and limited healthcare provider knowledge. At the micro level, healthcare professional–healthcare consumer relationships and role clarity were noted.

Conclusion: A sex positive approach may facilitate provision of sexual health education.

Practice implications: This scoping review points to the need to use a sex positive lens to identify and remove barriers to facilitate the provision of sexual health education. Providing this education may result in reduced fear, depression, and anxiety in ACS survivors.

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1. Introduction

Heart disease, also referred to as ischemic heart disease (IHD), is defined as “a condition which the heart muscle is damaged or does not function properly” [1]. One type of IHD is acute coronary syndrome or ACS [2,3]. The prevalence of ACS increases with age [1]. Canadians are an aging population and the number of Canadians who are at the ages of the highest prevalence of AMI is high and will continue to grow.

Each year, 63,000 Canadians are diagnosed with ACS [4]; however, the treatment of ACS has improved and 73 % of people survive ACS and are discharged home [5]. Survivors of ACS have families and lives to return to and patient education is an important aspect of adjusting to life post-ACS [2,5]. Patient education is defined as information provided by healthcare professionals to patients that will improve the health status of the patient by changing their health behaviours [6]. While patient education related to nutrition, medications, risk factors, and symptoms is frequently provided, patient education related to sexual health (SH) is not routinely provided [7]. The World Health Organization (WHO) identifies SH as a human right and defines it as:

A state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships ... [8].

Guidelines and a scientific statement from the American Heart Association (AHA) for the management of ACS state that sexual health education (SHE) should be included for ACS survivors [2,9]. There is an international consensus statement from the AHA and the European Society for Cardiology Council on Cardiovascular Nursing and Allied Professions related to the provision of SHE to people with cardiovascular disease and their partners that details providing SHE in acute care or ongoing care [10]. There is also a scientific statement from the AHA that recommends SHE be included in cardiac rehabilitation programs (CRPs) [11].

Although guidelines and scientific statements address the importance of SHE, the literature indicates that there is a lack of SHE [9], which may be linked to the low frequency of return to sexual activity of ACS survivors. Survivors of ACS reported a reduction in sexual activity ranging from 13 % to 75 % [12–20]. Women were 11 %–17 % less likely to return to sexual activity post-ACS when compared to men [14,18]. Several psychological symptoms were associated with a lack of sexual activity among ACS survivors. Depression and anxiety were associated with cardiovascular disease [10] but were also more prevalent when sexual activity was less frequent or absent [10,15,20]. These psychological issues negatively affected quality of life and relationships, which can further potentiate depression and anxiety [10,21]. Cardiac events can be precipitated by anxiety so understanding the root cause of anxiety and providing information about sexual concerns is important [10]. Another significant psychological symptom associated with limited sexual activities among ACS survivors is fear. Post-ACS, patients were often fearful of engaging in any physical activity [20]. This fear extends to sexual activity, as patients and partners reported not returning to sexual activity due to fear of having another ACS event

[10,22,23]. Although the recommendations and statements in guidelines as well as the documented negative psychosocial impacts, the majority of survivors reported that SHE was not provided [2,13,24–27].

Despite high levels of fear [10,22,23], anxiety, and depression [10,15,20] and despite guideline recommendations [2,9–11], there is a limited provision of sexual health education (SHE) to acute coronary syndrome (ACS) survivors [7]. A scoping review was conducted to inform health care providers about barriers, develop strategies to overcome the barriers, and implement SHE among survivors of ACS. No previous review related to SHE post-ACS was located. Health care professionals may use the results of this scoping review to promote SHE in this population.

1.1. Guiding frameworks

Two frameworks were used to guide this scoping review: Bronfenbrenner's Ecological Model [28] and sex positivity. Arskey and O'Malley (2005) argue that a framework is helpful in a scoping review to organize the presentation of the findings in a narrative fashion. A simplified version of Bronfenbrenner's Ecological Model, [28] was used to guide the analysis of the influencing factors and synthesis of findings in this scoping review. The interaction of individuals and their environment is described in Bronfenbrenner's Ecological Model, [28]. It describes the interaction of the macro level (broad societal context), the meso level (interaction between health care system and individuals), and the micro level (personal and interpersonal characteristics) [28].

A sex positivity framework or lens was also incorporated as the WHO (2006) definition of SH is sex positive. Sex positivity means that discussing sex or sexual activity is no different than discussing any other topic [29]. Sex positivity can be further defined as “ideology that promotes, with respect to gender and sexuality, being open-minded, non-judgemental and respectful of personal autonomy, given that there is consent” [30]. Sex positivity sees sex as a normal way that creativity is displayed instead of only as a way to obtain infections and diseases [31]. A sex positive lens makes space for and allows or requires healthcare providers to address sexual activity and SH in the same way they address medications and management of symptoms [29].

1.2. Purpose

We conducted this review to document current evidence to inform health care providers about the provision of sexual health education to this patient population.

2. Methods

A scoping review is undertaken to determine if there are gaps in existing research literature [32]. Published findings can be reviewed and conclusions can be drawn [32]. Scoping reviews do not always include an assessment of the quality of the existing literature [32]. The scoping review framework described by Arksey and O'Malley (2005) was used to guide this scoping review. Arksey

and O'Malley (2005) outline five stages of the scoping review, which are discussed below.

2.1. Stage 1: identifying the research question

Arksey and O'Malley (2005) suggest beginning with a broad question and then narrowing the focus as a sense of the breadth and scope of the literature is obtained. The research question used to guide this scoping review is “what are factors shaping SHE conducted by health care professionals for adult survivors of ACS?”

2.2. Stage 2: identifying relevant studies

To be as comprehensive as possible, the broad research question was combined with broad search parameters [32]. A librarian was consulted, and additional search terms were included after discussion with an expert in SH. PubMed, CINAHL, and SCOPUS were searched with combinations of iteratively developed search terms of keywords, medical subject headings, and major subject headings joined with the Boolean operators AND or OR (see Table 1 for search strategy). Non-English articles were excluded and no date limit was set. In total, 208 non-duplicate titles and abstracts were screened and 44 full-text articles were reviewed.

2.3. Stage 3: study selection

Inclusion and exclusion criteria are required to sift through the number of articles generated to ensure relevancy [32]. As suggested by Arksey and O'Malley (2005), the criteria were developed post hoc after becoming familiar with the literature. Inclusion criteria used to guide the selection of articles included: English language, human subjects, acute coronary syndrome or myocardial infarction, and a focus on the provision of SHE. Exclusion criteria included editorial or opinion articles and articles focusing on a diagnosis other than acute coronary syndrome or myocardial infarction (for example, there were several articles related to heart failure that were generated in the search). The first author initially reviewed all studies for inclusion and exclusion and shared the decisions which were then reviewed by all authors. Consensus between authors was reached on the inclusion or exclusion of all studies. When there was disagreement, the criteria and purpose were reviewed to guide decision-making. After applying the inclusion and exclusion criteria, 24 articles were included in this scoping review (Fig. 1).

2.4. Stage 4: charting the data

Key points from selected articles were charted, including the author, year, country of origin, aim or purpose, details on the sample and the design, and the key findings [32]. Charting the key points was conducted in a narrative fashion to incorporate context alongside the extracted data [32]. Quantitative results and qualitative findings were inputted into a table, which allowed for sorting of material based on themes or findings, year, country and so forth.

3. Results: stage 5: collating, summarizing and reporting the results

Twenty-four studies are included in this review: one literature review, six qualitative studies, and 17 quantitative studies. Of the primary research studies, 12 studies focused on the survivor perspective, 10 described the healthcare professional (HCP) perspective, and one included both perspectives. Publication dates range from 1980 to 2017. There has been an increase in the number of publications over time, with the number of articles doubling from 1980–1989 compared to 1990–1999 and 2000–2009 and

Table 1
Search strategies for CINAHL, Scopus, and PubMed.

Search strategy for CINAHL
1 Sexual health (MH)
2 "sexual activity"
3 "sexual health and well"
4 "sexual well"
5 "sexual health"
6 MH "Sexual Counseling"
7 OR 1-6
8 "post-myocardial infarc"
9 "myocardial infarc"
10 "acute coronary syndrome"
11 MH "Myocardial Infarction"
12 MH "Acute Coronary Syndrome"
13 OR 8-12
14 7 AND 13
15 Limit English = 110
Search Strategy Scopus
1 "sexual activity"
2 "sexual health and well"
3 "sexual well"
4 "sexual health"
5 "Sexual Counseling"
6 OR 1-5
7 "post-myocardial infarc"
8 "myocardial infarc"
9 "acute coronary syndrome"
10 OR 7-9
11 6 AND 10
12 Limit English = 251
Search Strategy PubMed
1 "Sexual Behavior"
2 "Sexual Behavior"[Mesh]
3 "sexual activity"
4 "sexual health and well"
5 "sexual well"
6 "sexual health"
7 "Sexual Counseling"
8 OR 1-7
9 "post-myocardial infarc"
10 "myocardial infarc"
11 "acute coronary syndrome"
12 Myocardial Infarction[Mesh]
13 "Acute Coronary Syndrome"[Mesh]
14 OR 9-13
15 8 AND 14
16 Limit English = 346

doubling again comparing each decade from 1990–2010 to 2010–2019. Although studies based in the North America predominate, there are studies from Europe and the Middle East along with one from South America. See Table 2 for more information on the included studies.

Results of this scoping review are presented thematically below, using the framework of Bronfenbrenner's Ecological Model [28], from a macro, meso, and micro level [28]. These themes culminate in the limited to non-existent practice of providing SHE to ACS survivors.

3.1. Macro level

Culture was identified as a factor that influenced the provision of SHE to ACS survivors [12,17,23,33]. Differences in culture among countries was reported by Lindau et al. (2014), who noted that discussions related to SH were initiated by survivors in the United States of American while in Spain, these discussions were initiated by physicians.

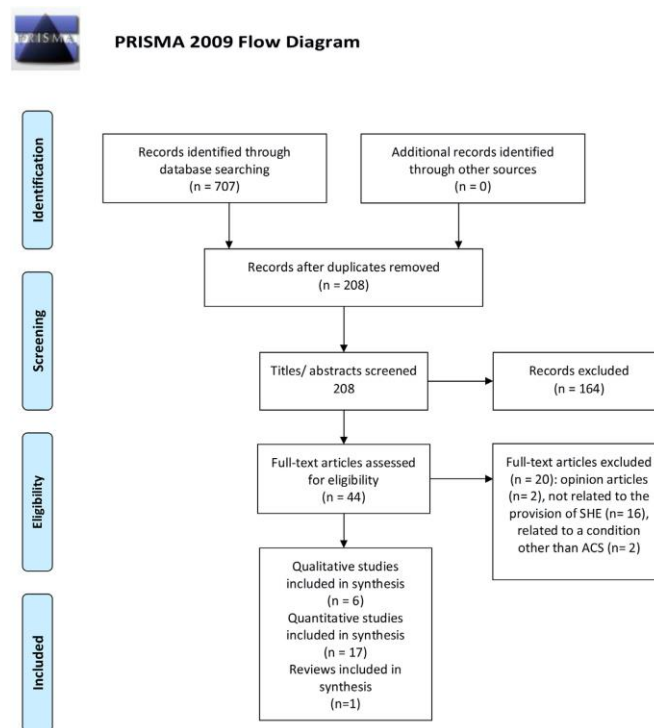


Fig. 1. PRISMA flow diagram of search and study selection process.

3.2. Meso level

The meso level theme reflects the healthcare context. The meso level includes the hospital environment and limited health care professional education.

3.2.1. Hospital environment

The hospital environment, specifically the short length of stay, lack of privacy, and acuity of ACS survivors, was frequently identified as a reason that SHE was not prioritized [13,33–36]. The short length of stay required that nurses prioritize education about topics such as medications over SHE [33–36]. A longer length of stay may have been related to increased acuity and SHE was also not prioritized when ACS survivors were perceived as acutely ill [13,36]. Akdolun and Terakye (2001) noted that ACS survivors who were hospitalized for more than one week received no more information than those hospitalized for less than one week.

ACS survivors may not perceive the hospital environment as conducive to SHE. Two studies identified that ACS survivors did not prioritize information related to SH as important while in hospital and preferred to receive this education after hospital discharge [37,38]. Time since discharge may affect perceptions of when SHE should occur. In one study, the majority of ACS survivors believed that the majority of the education should be taught prior to discharge; however, at six months post-discharge, this belief dropped to only one-third [39]. Of particular interest, ACS survivors indicated that the education should be provided while in hospital and again after discharge [22,39].

3.2.2. Limited health care professional education

A lack of HCP education was noted as a reason for not providing SHE to ACS survivors [33,35,36,40–43]. Further training or continuing education related to SH and SHE was needed [36] and would be welcomed by nurses [33]. This lack of HCP education impacts HCP knowledge about SH and SHE.

A lack of HCP knowledge related to SH and SHE was pervasive in the literature [40–43]. One study found that 80 % of HCP reported that they did not have adequate competence to provide SHE [40]. This self-reported inadequate competence was also consistent with low knowledge scores. Despite using different SH knowledge scales, two research teams found that the mean knowledge score for cardiac nurses was less than 60 % [42,43]. Another study reported that less than one percent of nurses were able to properly answer 60 % of the questions [41]. Lack of education and knowledge may be associated with the limited confidence and discomfort [35] for HCPs in providing SHE.

3.3. Micro level

The micro level theme relates to the interpersonal HCP – ACS survivor relationship, “include my sexual partner”, personal biases, and the importance of role clarity.

3.3.1. The interpersonal HCP – ACS survivor relationship

Several researchers discussed how culture influenced openness to dialoguing and hearing information about one's SH [12,23,33]. Concern about causing ACS survivor embarrassment, offense, or distress related to discussing sexuality was noted [33,36]. One study

Table 2
Summary of study characteristics.

Characteristics of Quantitative Studies					
Study	Study Design and Setting	Sample Characteristics	Intervention	Outcomes and Measures	Results
Akdolun & Terakye, 2001 (Turkey)	Non-experimental, descriptive study. Hospitalized on cardiology wards in government, university, and social security hospitals.	110 MI patients, 95.5 % male, 100 % married, 25 % aged 24–40	None	The effect of MI on daily activities and sexual activities, sexual functioning, knowledge: questionnaire	Hospital environment: patients too acutely ill while in hospital so not a priority. Bias: Younger ACS survivors were more comfortable obtaining information related to SH compared to older ACS survivors.
Barnason, Steinke, Mosack, & Wright, 2011 (USA)	Non-experimental, descriptive, comparative study. Midwestern states	320 nurses: 81 CR nurses, 239 acute care nurses	None	Differences between outpatient CR and acute care nurses perceived barriers and clinical practices of providing sexual counseling for myocardial infarction patients: Survey of Sexuality Related Nursing Practice- Myocardial Infarction questionnaire	Role clarity: CR higher in responsibility for providing sexual counseling & more concerns regarding discussing sexual behaviours; acute care higher in levels of confidence & knowledge to provide sexual counseling & likely to provide sexual counseling in practice. Actual Practices of Providing Sexual Activity Education: CR nurses had higher ratings of implementing clinical practices for providing sexual counseling of MI patients.
Ivarsson, Fridlund, & Sjöberg, 2009 (Sweden)	Non-experimental, descriptive, observational study. 73 of the 75 hospitals in Sweden that treat acute patients with MI and 48 hospitals with cardiac rehabilitation programs.	Nurses and physicians (n=104).	None	Type of information about sexual function and coexistence given to patients and their partners after an MI: Questionnaire containing covering five different areas: patient and partner information, relation and function, external experts, competence, and source of information	Limited healthcare provider education: The majority of the teams did not consider that they had access to sufficient information material about sexual and coexistence issues for patients with MI and their partners at their CCUs.
Lindau et al., 2014 (USA & Spain)	Non-experimental, descriptive, longitudinal study. Part of the VIRGO study, 103 USA sites; 24 Spanish sites.	2:1 sample of women (N=2349) and men (N=1152) ages 18–55 years with AMI. Median age was 48 years.	None	Physical function: interviews & 12-item Short-Form Health Survey Physical Composite Score (SF-12 PCS)16; Stress: Perceived Stress Scale (PSS); Depression: Patient Health Questionnaire (PHQ-9); Prediction of 6-month mortality: Elements of the Global Registry of Acute Coronary Events (GRACE) Risk Score	Culture: 1-month post-MI 15 % women & 19 % men discussed SA with MD, patients initiated in USA, MDs in Spain. The interpersonal healthcare provider – healthcare consumer relationship: Patients are comfortable discussing sexual health with a healthcare provider. Bias: Being female, sexually inactive, and being older were statistically significantly associated with no patient–physician counseling about resuming sex after AMI. Role clarity: appropriate for an MD to discuss sexual health and expressed feeling comfortable discussing sexual issues with an MD.
Oskay, Can, & Camci, 2015 (Turkey)	Non-experimental, descriptive, comparative study. Kocaeli University, Kocaeli Medical Faculty in Turkey	45 female patients (62.73 ± 8.55 years) with MI and 50 control women.	None	Assess sexual function in female patients with MI: survey developed by researchers with 20 questions that questioned personal characteristics; Sexual dysfunction: Female Sexual Function Index (FSFI); Depression Beck Depression Inventory.	Bias: None of the women reported receiving counseling about resuming sexual activity after an MI.
Özdemir & Akdemir, 2013 (Turkey)	Non-experimental, descriptive study. Cardiology clinics and outpatient clinics of university hospitals in Turkey.	108 nurses	None	Nurses' knowledge of impact of MI on sexual life, the physiologic effect of sex on the body and indirectly infer practice of providing education: structured interviews with open-ended questions	Limited healthcare provider education: Nurses do not receive education about SA so do not provide education. Role Clarity: physicians are responsible for providing not nurses. Actual Practices of Providing Sexual Activity Education: Almost all the nurses (99.4 %) did not provide sexual education to post-MI patients due to a lack of knowledge and skill and their

Table 2 (Continued)

Characteristics of Quantitative Studies					
Study	Study Design and Setting	Sample Characteristics	Intervention	Outcomes and Measures	Results
Papadopoulos, Larrimore, Cardin, & Shelley, 1980 (USA)	Non-experimental, descriptive. Nine hospitals in a large metropolitan area	100 female partners of MI patients	None	The impact of MI on the sexual life of the wives of heart attack victims, describing the sexual counseling they received, their sexual concerns, and educational needs: interview	perception that sexual issues belong to a patient's private domain. Include my partner: too embarrassed to ask a question and they wanted their husband present to ask the question for them.
Papadopoulos, Beaumont, Sonya, & Patsy, 1983 (USA)	Non-experimental, descriptive study. Seven hospitals in a large metropolitan area	130 female patients under 65 years of age with first MI (mean age 53.8 years old)	None	The effect of myocardial infarction on the sexual life of the female patient: interview	Include partner: 39 of 84 patients would have preferred to have instructions together with their husband.
Rahim, Allana, Steinke, Ali, & Khan, 2017 (Pakistan)	Non-experimental, descriptive, observational study. From the CCU, cardiac step-down unit, and cardiac rehab units of three tertiary care centres	153 nurses, mean age 28.4 years, 41.1 % single, mostly female	None	Level of knowledge among about sexual counseling of post-MI patients: "Nurses' Knowledge on Sexual Life Changes Following a Myocardial Infarction"	Limited healthcare provider education: mean total knowledge score for cardiac nurses was 13.7 out of a possible 27 (min. 5, max 23).
Shuman & Bohachick, 1987 (USA)	Non-experimental, descriptive study. Community and teaching hospitals, CCU and progressive cardiac care units.	50 nurses, 54 % from community hospital, 46 % from teaching hospital.	None	Nurses' level of sexual knowledge, attitudes towards human sexuality & perceptions of comfort with topic, preparedness and responsibility to provide counseling/ education: Sex Knowledge and Attitude Test (SKAT)	Limited healthcare provider education: SKAT: Knowledge av 41.7/ 71 for cardiac nurses.
Steinke, Mosack, Barnason, & Wright, 2011 (USA)	Non-experimental, descriptive, comparative study. 1994: from 1 state working in CR, CICU, general or step-down cardiac care at 3 large centres 2009: from 7 states, including 3 large centres, 1 cardiac speciality centre, 2 regional cardiovascular conferences and 2 national organizations.	1994: 171 nurses 2009: 288 nurses	None	Examine trends in the practice of sexual counseling by cardiac nurses: 1994: Survey on Sexuality in Nursing Practice (SSNP), 2009: Survey on Sexuality in Nursing Practice-Myocardial Infarction SSRNP (2009).	Role Clarity: 2009 felt more responsible for sexual counseling, believed appropriate for nurses to discuss sexual concerns if patient brought up.
Steinke & Patterson-Midgley, 1995 (USA)	Non-experimental, descriptive study. From CR, CICU, general or step-down cardiac care at 3 large centres in 1 state.	171 nurses, majority female and less than 40 years old	None	Assessment of sexual concerns and practice of sexual counseling post MI by nurses: Survey on Sexuality in Nursing Practice	Hospital environment: Lack of time due to short length of stay. Limited healthcare provider education: lack of education leads to lack of comfort. Role clarity: Patients should initiate conversations about SH. Actual Practices of Providing Sexual Activity Education: 42 % had not discussed sexual concerns with patients 92 % had not used a nursing diagnosis of sexual dysfunction 71 % never referred clients for sexual counselling.
Steinke & Patterson-Midgley, 1996 (USA)	Non-experimental, descriptive, comparative study. From CR, CICU, general or step-down cardiac care at 3 large centres in 1 state. Sexual counseling of MI patients: nurses' comfort, responsibility, and practice.	171 nurses, majority female and less than 40 years old	None	Assess comfort and responsibility levels and relationship to practice of sexual counselling by critical care nurses: survey using the Survey on Sexuality in Nursing Practice (SSNP)	Role Clarity: Comfort: mean score 6.8/12. CR nurses most comfortable. Responsibility: mean score 11.53/20 highest in rehab nurses. Actual Practices of Providing Sexual Activity Education: Practice in providing sexual counseling: mean score 11.06/51 highest among rehab nurses.
Steinke & Patterson-Midgley, 1996 (USA)	Non-experimental, descriptive, comparative study. Patients identified by discharge notes from a cardiologist group.	101 post-MI patients, able to use 96 surveys, respondents 54 % male, 46 % female, 96 % Caucasian, ¼ married and living with spouse	None	MI patient's perspective of sexual counseling initiated by RNs or MDs in acute care: survey	Bias: Of the 32 who received information, 56 % male 44 % female (no diff), didn't vary by age either 39 % married received, 6 % widowed, 17 % divorced received.
Steinke & Patterson-Midgley, 1998 (USA)	Longitudinal descriptive prospective study. Medical records of patients from two large medical centers and	Convenience sample patients, 9 at 2 months, 78 at 4 months, and 67 at 6 months	None	Differences in the perceptions of the importance and timing of sexual counseling in patients with MI: Sexual Counseling Needs of MI Patients Survey.	Hospital environment: At 2 months after MI, the majority of subjects (50 %–74 %) believed that teaching for 10 of the 14 items should be done while still

Table 2 (Continued)

Characteristics of Quantitative Studies					
Study	Study Design and Setting	Sample Characteristics	Intervention	Outcomes and Measures	Results
and Timing of Sexual Counseling After Myocardial Infarction	one large physician group in the Midwest.			mailed out at 2, 4, and 6 months post-MI	in the hospital. 4-month data similar, 6-month not reported on. Include partner: Comments on the survey included wanting partner included in education Include partner: Usually watched with partner.
Steinke & Swan, 2004 (USA)	Two-group, quasi-experimental, repeated-measures design. Five research instruments were administered at pretest and at 1, 3, and 5 months post-MI. Large medical center in the Midwest, comprised of two campuses within the same city.	N=115, 64 to experimental 51 to control N=87 completed 1-month post-test N=78 completed 2-month post-test N=72 completed 5-month post-test	Experimental group: 15-minute videotape on sexual concerns after MI to take home. Both experimental and control groups received the usual verbal and written instructions provided by the cardiac rehabilitation staff.	Knowledge: Sex After MI Knowledge Test Anxiety: State Trait Anxiety Inventory (STAI) Quality of life: Quality of Life Index (QLI)–Cardiac Version III, Return to sexual activity: participant's report of sexual activity since the last testing period Sexual satisfaction: Watt Sexual Function Questionnaire	
Timmins & Kaliszer, 2003 (Ireland)	Non-experimental, descriptive, longitudinal, comparative. A large hospital in Dublin.	27 patients with first, uncomplicated MI with no serious comorbidities and no mental illness or narcotic analgesia, fluent in English. 68 nurses in CCU and cardiac ward.	None	Information needs of post MI patients compared to perspective of RNs: Cardiac Patients Learning Needs Inventory. Administered 3 days post MI then 6 weeks post MI.	Hospital environment: While in hospital patients do not rank physical activity highly, prefer information after discharge.
Characteristics of Qualitative Studies					
Study	Study Design and Setting	Participants	Study Focus	Main Findings	
Abramsohn et al., 2013 (USA)	Qualitative descriptive study using semi-structured, qualitative telephone interviews. Purposive selection from the Translational Research Investigating Underlying Disparities in Acute Myocardial Infarction Patients' Health Status Registry.	Patients, 17 partnered women (aged 43 to 75 years)	More fully understand the female sexual recovery following an MI and inform design of an evidence-based strategy to improve female sexual outcomes post AMI	Hospital environment: prefer information while in hospital and again post discharge. Role Clarity: HCPs should initiate conversations about SH.	
Altioik, & Yilmaz, 2011 (Turkey)	Qualitative descriptive study using individual in-depth, semi-structured interview. A cardiology department of a university hospital in Turkey.	32 married patients, mean age was 61.09 ± 8.17, 25% were female, 60% arranged marriage	To determine the opinions of individuals who have had MI about sex, the impact of MI on their sexual lives and their counseling needs regarding sexual life after MI	Culture: 70% of Turkish participants report SH not discussed in Turkish culture. The interpersonal healthcare provider – healthcare consumer relationship: Patients want to discuss sexual health with a healthcare provider. Culture: no sexual health education related to religion, different cultural backgrounds, the small size of the community, and religious beliefs of the hospital. Hospital environment: not prioritized due to short length of stay, no privacy to discuss Limited healthcare provider education: need and want more education/ training related to sexual health to be able to provide information. The interpersonal healthcare provider – healthcare consumer relationship: nurses use words "embarrassed, uncomfortable, awkward, and offending" when describing providing SHE.	
Barnason, Steinke, Mosack, & Wright, 2013 (USA)	Content analysis of survey with 2 open-ended questions. Hospitals, members of national nursing associations (American Association of Critical-Care Nurses and National Association of Clinical Nurse Specialists), listservs, and conference attendees in seven Midwestern states in the USA.	320 nurses working in acute care or cardiac rehabilitation	To examine nurses' perceptions of providing sexual health education and counseling for patients experiencing a myocardial infarction.	Hospital environment: not prioritized due to short length of stay, no privacy to discuss Limited healthcare provider education: need and want more education/ training related to sexual health to be able to provide information. The interpersonal healthcare provider – healthcare consumer relationship: nurses use words "embarrassed, uncomfortable, awkward, and offending" when describing providing SHE.	
Ivarsson, Fridlund, & Sjöberg, 2010 (Sweden)	Questionnaire with 2 open-ended questions sent by email. 18 centres comprising district, central and university hospitals from across Sweden.	HCPs from 18 centres	Describe health professional's attitudes towards sexual information for patients at CCU following MI	Hospital environment: not prioritized due to short length of stay. Role Clarity: patients should initiate conversations about SH, physicians or specialist should provide education.	
Söderberg, Johansen, Herning, & Berg, 2013 (Denmark)	Phenomenological hermeneutic study using interviews. Two heart hospitals in Denmark.	11 female patients	Investigate women's experience of sexual problems after a myocardial infarction	Hospital environment not important while in hospital, prefer information after	

Table 2 (Continued)

Characteristics of Qualitative Studies				
Study	Study Design and Setting	Participants	Study Focus	Main Findings
Steinke E.E., Patterson-Midgley P.E., 1998 (USA)	Survey with open ended questions. Acute care facility in the USA and cardiologist discharge notes.	171 nurses: 14 men (8%) and 157 women (92%), with most (61%) younger than 40 years of age. 96 patients, 54% (n = 52) were men and 46% (n = 44) were women	Perspectives of nurses and patients on the need for sexual counseling of MI patients.	discharge. Include my partner: having their partner present reduced the challenge of sharing information related to sexual implication of a myocardial infarction. Bias: female patient expected to receive no education. Hospital environment: not prioritized due to short length of stay, patients too acutely ill while in hospital, no privacy in hospital to discuss. Limited healthcare provider education: need more education/training related to sexual health to be able to provide information. The interpersonal healthcare provider – healthcare consumer relationship: when nurse brought up sexuality the patient seemed embarrassed, so the nurse no longer felt comfortable initiating discussions. Bias: Patients reported that younger patients should receive SHE.
Characteristics of Reviews				
Study	Aim/Purpose	Search strategy	Main Findings	
Zeydi et al., 2016 (Iran)	Comprehensive review of literature describing women's sexual issues and concerns after MI to expand knowledge and ID strategies for improving quality of care	PubMed, Scopus, ScienceDirect, ProQuest, Google Scholar, 8 articles	Culture: Taboo topic. Actual Practices of Providing Sexual Activity Education: 85 % nurses aware only 21 % provided education.	

shared quotes from nurses that contained these words: embarrassed, uncomfortable, awkward, and offending [33]. Steinke and Patterson-Midgley (1998) shared that when SH was brought up by a nurse, the ACS survivor seemed embarrassed, so the nurse no longer felt comfortable initiating discussions about SH with ACS survivors. This finding was contradicted when ACS survivors wanted to be provided with SHE from a HCP [23] and expressed comfort discussing SH with a HCP [17]. Although the literature presents these conflicting findings, discomfort in discussing SH may be a shared experience amongst health care professionals and ACS survivors.

3.3.2. "Include my sexual partner"

Five studies indicated that ACS survivors wanted their partners to be included when HCPs delivered SHE [38,39,44–46]. Steinke and Swan (2004) noted that ACS survivors usually watched an education videotape with their partners. In two studies, specific reasons for wanting male partners present were noted [38,46]. Papadopolous et al. (1980) noted that women expressed the need for their male partners to be included with the rationale that they were too embarrassed to ask questions. Söderberg, Johansen, Herning, and Berg (2013) found that having partners present reduced the challenge of sharing information related to sexual implication of a myocardial infarction. No studies were located that addressed the provision of SHE to adults who identified as single and to adults who identified as LGBTQ.

3.3.3. Personal biases

Several biases were identified in the literature that influenced the provision of SHE, including age [13,36], gender [17,38,47], and

marital status [26]. While one group of authors noted that ACS survivors believed that SHE should be provided to younger ACS survivors [36], another group of authors noted that younger ACS survivors were more comfortable obtaining information related to SH compared to older ACS survivors [13]. Lindau et al. (2014) acknowledged a similar bias in their study, which reported that older ACS survivors were statistically significantly less likely to be counseled about SH. Being female also placed ACS survivors at a disadvantage, as women expected [38] and received [17,47] less SHE compared to men. One older study identified that married ACS survivors were more likely to receive SHE compared to non-married ACS survivors, whether divorced or widowed [26].

3.3.4. Role clarity

A lack of role clarity of HCPs about responsibility for SHE was identified [22,26,34,35,41,48,49]. ACS survivors reported feeling that HCPs should initiate conversations about SH [22]. HCPs, specifically nurses, expressed that ACS survivors must initiate a conversation about SH [34,35]. Nurses identified that a specialist or a physician should be responsible for providing SHE [34,41].

Juxtaposed to these reports are the findings which indicate that is the role of the HCP to discuss SH [48–50]. Steinke et al. (2011) noted an increased in perceived responsibility for the provision of SHE from 1994 to 2009. In 1996, all nurses reported responsibility for providing SHE; however, cardiac rehabilitation (CR) nurses reported that they were more responsible for providing SHE than coronary intensive care or general cardiology ward nurses [50]. This increased responsibility felt by nurses working in CR was also noted in another study [49].

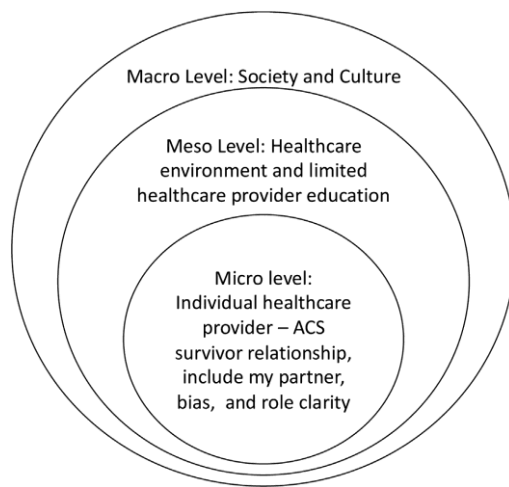


Fig. 2. The macro, meso, and micro level influences on the practice of providing sexual health education. Adapted from Bronfenbrenner's ecological model.

3.4. Actual practices of providing SHE

Five studies described SHE with ACS survivors [12,35,41,49,50]. Nurses were found to provide SHE infrequently, ranging from only 1% [41] to 21% [12]. One study reported that 42% of nurses did not discuss sexual concerns with ACS survivors and provided no information related to sexuality [35]. Among nurses, the location of practice was noted to influence the actual practice of providing SHE, as two studies found that nurses working at CR sites were more likely to provide SHE compared to nurses working in acute care [49,50].

4. Discussion and conclusion

4.1. Discussion

The WHO identifies that for sexual health to be possible, “the sexual rights of all persons must be respected, protected and fulfilled” [8] and that sexual rights are viewed as a human right [8]. Given this view, it was disconcerting that this scoping review confirmed a limited to non-existent provision of SHE to ACS survivors. To the knowledge of the authors, this is the first review to explore key factors shaping and barriers preventing SHE to ACS survivors. These findings advance our understanding of the provision of SHE to ACS survivors at the macro, meso, and micro levels.

A sex positivity lens may provide further insight into the complexities of the inter-relationships between macro, meso, and micro level factors. At the macro level, society has historically been sexually repressive, or sex negative [51]. Although society has moved on from believing that masturbation leads to death [51], sexuality in culture remains focused on the negative. News headlines frequently focus on arguments related to abortion rights, activism for gay rights, lack of appropriate sex education in school, and sexual deviances of public figures. Research literature follows suit with the majority of published studies related to sexual behaviour focusing on problems associated with sexual behaviour [51,52]. As time has passed, more articles related to the positive attitudes, sexual desire or fantasy, sexual satisfaction, or healthy relationships have been published; however, the proportion remains low [51]. While this is progress, one

can state that mainstream society continues to view sexuality in a negative light [51] and thus, the dominant or overarching culture continues to repress SHE.

This negative light emerged at the meso level also. The desire for privacy to discuss SH and the repetitive reduction of importance of SHE compared to education related to medications or symptom management [33] could reflect the avoidance and sexual repression of society at large [51]. The cultural repression of discussions of SH may filter down to the healthcare context with HCPs sharing various reasons why they are unable to provide SHE [13,33–36]. ACS survivors may agree that the hospital environment is not the ideal location for SHE to occur; however, with the large number of ACS survivors who report that SHE is not provided [2,13,24–27], the core reasons for not providing SHE may be cultural in nature. A consistent lack of education related to sexuality in the education programs of HCPs also reflects society's aversion to sexuality [51]. While there is a deficit of sex education in American culture [51], HCPs in Europe [40,41] and the Middle East [42] also reported not having an adequate knowledge base to provide SHE. This suggests that the deficit of sex education, beginning perhaps in elementary school and continuing through undergraduate and graduate education, is a broad, cultural issue.

The micro level continues to convey this sense of sexual repression [51]. HCPs consistently reported concerns related to making ACS survivors feel uncomfortable, embarrassed, or offended [33,36]. This fear that HCPs hold reflects the sex negative culture [51]. HCPs may be projecting their feelings of discomfort or embarrassment or their offense to discussing SH, again related to society's history of sexual repression [51]. ACS survivors are open to and comfortable with being provided SHE from HCPs [17,23] and want their partners included in SHE [38,39,44–46].

These biases of age [13,36], gender [17,38,47], and marital status [26] also reflect the cultural context of healthcare. Research has suggested that sexual activity occurs across the lifespan; it does not cease due to age [53,54]. The idea that as human beings age, sexual activity, sexual desire, and sexual needs disappear has been challenged by multiple studies of older adults reporting reduced but sustained sexual activity, desire, and satisfaction [53,55,56]. The bias against providing SHE to female survivors is contradictory to the reports from women of similar sexual activity levels as men prior to their cardiac event [27] and of wanting SHE [12,22]. The bias of not providing women with SHE may be related to the age bias as women are more likely to be older when presenting with ACS. The bias of the availability of a partner also does not influence the need for SHE if a broad view of sexuality is taken. In 2005, Elaine Steinke recognized that sexual activity is not necessarily a specific physical act, but rather the “physical aspects of sexuality” [57] and that what sexual activity is may mean something different to each individual person. Steinke continued this work in 2013, by recognizing that other sexual “activities such as kissing, hugging, fondling, masturbation” [58] should be identified to patients as separate from intercourse and may be an alternative to intercourse. As well, being widowed or divorced does not mean that one no longer has romantic partners and no longer engages in penetrative sexual activity. The cultural biases that older adults do not engaged in sexual activity, that women do not want SHE, and that only married people engage in sexual activity all impede the provision of SHE.

Healthcare professionals endorse that SH is an important topic to discuss with patients then abdicate responsibility to other HCPs [48,50]. Changes in sense of responsibility [48] flow along with the progress of viewing the positive aspects of sexuality [51]. However, the reported lack of knowledge [40–43] suggests a failure not only of formal education programs but also of HCP continuing education and spirit of inquiry. HCPs repeatedly cite a lack of knowledge [40–43] and a growing sense of responsibility [48]; however, they are

not seeking out the information that is available to them in peer-reviewed journals (i.e. Levine et al., 2012).

The unfortunate outcome of the intersecting themes is neglecting to provide SHE to ACS survivors (Fig. 2). Society (macro) projects its sexually repressive views [51] on the healthcare context and HCPs (meso), which reduces the practice of providing of SHE to individuals (micro).

Using a sex positivity lens illuminated a major gap in the literature but holds much promise in identifying best practices in SHE. Future investigations about effective provision of SHE could lead to toolkits for HCPs that would assist them in following practice guidelines. By combining the existing guidelines [2,9–11] with suggestions or tips on how the guidelines have successfully been translated into practice, HCPs would be provided with a roadmap to navigate conversations related to the promotion of SH among ACS survivors. Research is needed to describe best practices in SHE with ACS survivors who identify as LGBTQ. An institutional ethnography is warranted to explicate the underlying values and principles guiding SHE within the health sciences.

4.2. Conclusion

This scoping review indicates that SHE with survivors of ACS is influenced by various intersecting factors. A sex positive lens highlights not only how a history of sexual repression has influenced the practice of providing SHE, but also that there has been a deficit-focus in investigating the practice of providing SHE. Improvement in treatments for ACS mean that over three-quarters of people affected by ACS are survivors [5]. Education is an important part of the care plan for survivors of ACS and SHE is included in guidelines [2,9]. Interventions are needed to ensure the provision of SHE to these survivors; however, a gap in the literature exists related to how to successfully apply existing guidelines into practice. The number of ACS survivors will continue to grow as the population of Canada ages [1,59] so apply these guidelines and ensure that human rights [8] are respected.

4.3. Limitations and strengths

There are several limitations of this study. First, although a thorough literature search was conducted, there is a possibility of missed articles. This is especially true because SH related to ACS is an emerging concept which leads to a lack of indexing and inconsistent terms that could lead to studies being missed. Only articles in English are included, which could lead to missing data. Second, the majority of the studies took place in North America, so results were skewed towards this specific culture and healthcare practices. Third, there had been no assessment of the quality of the studies included in this review, as scoping reviews do not include a quality assessment [32]. Finally, several key populations were not identified in this scoping review; for instance, single adults and LBGTQ2S people were not specifically included in any of these studies. This is a major limitation of the existing literature and is worthy of further study. This lack of existing literature limits the scope of this review to a specific heterosexual population of ACS survivors.

There are several strengths of this review, including that three reviewers extracted and analysed the data. Second, theoretical frameworks were used to analyse the data which also lends support to the findings [32]. Third, this is an under-researched topic that is significant to health of Canadians as well as health care professionals' practice.

4.4. Practice implications

There are two practice implications that arise from this scoping review. Firstly, although there are guidelines promoting the

inclusion of SHE for ACS survivors [10,11], this education is rarely provided [7]. Previous research focused on why SHE was not being provided to ACS survivors. To date, researchers have not investigated the factors influencing the provision of SHE using a sex positivity lens. This review clarified some of the underlying intersecting influences that require attention and investigation to promote the provision of SHE to ACS survivors as SH is an inherent right of all individuals (WHO).

Secondly, the burden of heart disease in Canada is high [1], so enhancing our understanding of the factors influencing the provision of SHE may facilitate the successful integration of this guideline-suggested education into healthcare practice. Successful application of this guideline-suggested practice could reduce the fear that survivors have related to resuming sexual activity [10,20,22,23] and lead to an increase in the return to sexual activity. Returning to sexual activity may reduce the prevalence of depression and anxiety in ACS survivors.

Funding

This work is supported by the Dr. Helen Preston Glass Fellowship Award from the Canadian Nurses Foundation, Research Manitoba, and the Irene Nordwich Foundation.

Acknowledgements

The authors would like to acknowledge Dr. Reece Malone for his expert assistance with identifying relevant keywords and Laurie Blanchard, Nursing Librarian, for her assistance with developing and formatting the search protocol.

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Chapter 3: “Just sexercise” – Healthcare providers’ perceptions about sexual health

education in cardiac rehabilitation programs

In this chapter, I present the findings of a qualitative research study exploring health care providers' perceptions of sexual health education in cardiac rehabilitation programs. This study investigated the gap identified by the scoping review by exploring healthcare providers' perspectives about the strengths in providing sexual health education. The findings of this study include the themes of: Sexual Health Education, "Say the word – sex!", the Individual Characteristics of the Healthcare Provider, and the Institution Context. These findings provided concrete examples and suggestions for healthcare providers to incorporate sexual health education in cardiac rehabilitation programs. The findings also shed light on systematic, contextual, and individual policy and practice changes required to bring sexual health education into the mainstream of patient education. The qualitative research study and its findings are presented in this chapter and discussed in concert with the findings of the scoping review in Chapter 4.

The research study was designed and conducted collaboratively with the student, her advisor, and committee members. The student drafted the initial manuscript draft and revised it based on constructive feedback from her advisor and committee members. The manuscript is entitled "'Just sexercise' – Healthcare providers' perceptions about sexual health education in cardiac rehabilitation programs". The manuscript will be submitted for publication with the student as the primary author and her advisor and committee members as co-authors. This manuscript is deemed to be of publishable quality as it builds on the existing body of knowledge and provides a novel perspective on the provision of sexual health education to survivors of ACS.

“Just sexercise” – Healthcare providers’ perceptions about sexual health education in cardiac rehabilitation programs

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Abstract

Annually, acute coronary syndrome (ACS) is diagnosed in 63,000 Canadians, and 73% survive. Although practice guidelines and scientific statements clearly identify the importance of providing sexual health education to ACS survivors, it is not routinely provided. By not including sexual health education to ACS survivors, this patient population may experience higher rates of fear, depression, and anxiety. There is a paucity of research literature about the successful provision of sexual health education post-ACS. The purpose of this study was to explore healthcare providers' experiences providing sexual health education to ACS survivors. An interpretive descriptive design was used with convenience sampling. Sex positivity and a strengths-based approach guided the study. Eight healthcare providers, employed in cardiac rehabilitation in a western Canadian province, volunteered to participate. The first author conducted semi-structured, digitally recorded interviews. The first author's reflective journal and a short, socio-demographic survey were additional data sources. Data were analysed using open, axial, then selective coding and constant comparative analysis. Participants enthusiastically shared their experiences of providing sexual health education to ACS survivors, and key barriers and facilitators were identified. Barriers and facilitators were categorized according to sex and sexuality, the individual, and the institution. The findings may offer effective strategies to healthcare providers for use in their practice and provide a foundation to revisit and revise policy and programs in cardiac rehabilitation. Successfully providing sexual health education may reduce fear, depression, and anxiety as well as increase the return to sexual activity among ACS survivors. Ultimately, purposefully and thoughtfully providing sexual health education to ACS survivors may improve their quality of life.

Introduction

Heart disease is a leading cause of hospitalizations in Canada (Canadian Institute for Health Information, 2018). Heart disease is defined as “a condition which the heart muscle is damaged or does not function properly” (Public Health Agency of Canada, 2018, p. 4). One type of heart disease is acute coronary syndrome or ACS (Amsterdam et al., 2014; O’Gara et al., 2013). Treatment of ACS has improved, with a mortality rate of 27% (Fitchett et al., 2011). Survivors of ACS have families and lives to return to, and education is an important aspect of adjusting to life post-ACS (Amsterdam et al., 2014).

Clinical practice guidelines recommend offering patients with ACS education related to plan of care, recognition and management of symptoms, risk assessment, prognosis, and sexual health (Amsterdam et al., 2014; O’Gara et al., 2013). Survivors of ACS receive the majority of this education in cardiac rehabilitation programs. Participation in a cardiac rehabilitation program with patient education leads to a significant increase in patient knowledge and health behaviour change (Ghisi, Abdallah, Grace, Thomas, & Oh, 2014). However, one systematic review noted that only one of the 42 studies included patient education about sexual health (Ghisi et al., 2014).

Sexual health is defined as “a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity” (World Health Organization, 2006, p. 5). Lack of inclusion of sexual health education in cardiac rehabilitation programs is consistent with findings from the patient perspective. Patients report and demonstrate a lack of knowledge related to sexual health post ACS along with fear about returning to sexual activity post-ACS (Abramsohn et al., 2013; Steinke et al., 2013). Survivors of ACS describe a significant reduction or cessation in sexual activity post-ACS (Drory, Kravetz, &

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Weingarten, 2000; Lindau et al., 2012). A lack or reduction in sexual activity post-ACS is linked with increased rates of depression and anxiety (Eyada & Atwa, 2007; Steinke et al., 2013).

Depression and anxiety are common in ACS survivors and are associated as causes of ACS, so this “double entendre” merits significant consideration.

While two guidelines (Amsterdam et al., 2014; O’Gara et al., 2013), a scientific statement (Levine et al., 2012), and a consensus document (Steinke et al., 2013) recommend providing sexual health education to ACS survivors, the majority of this patient group did not receive sexual health education (Akdolun & Terakye, 2001; Brännström et al., 2014). The located literature related to healthcare providers and the provision of sexual health education focuses on deficits, including limited knowledge, lack of experience, and negative attitudes. There is a paucity of research literature about the successful provision of sexual health education post-ACS. A recent scoping review highlighted the macro, meso, and micro level factors influencing the provision of sexual health education to ACS survivors (Hyde, Martin, & Rieger, 2020). This scoping review illuminated a gap in the literature: the consistent approach to the practice of providing sexual health education from a deficit standpoint with a focus on barriers, such as lack of education, lack of knowledge, lack of sense of responsibility and so forth (Hyde et al., 2020). No located study asked health care providers about their experiences of providing sexual health education to ACS survivors to search for patterns of what is best practice (Hyde et al., 2020).

Purpose

The purpose of this study was to explore healthcare providers’ experiences of providing sexual health education to ACS survivors in cardiac rehabilitation programs, focusing on successes, to arm healthcare providers with knowledge of how to approach sexual health with

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patients. The research question was: What are healthcare providers' experiences of providing sexual health education to survivors of ACS in cardiac rehabilitation programs?

Guiding Frameworks

Two frameworks guided the study through the development of the research question, the development of the semi-structured interview guide, data analysis, and discussion of the findings. The first is sex positivity. Sex positivity views sex as a part of life (Williams, Prior, & Wegner, 2013) and that it requires the same attention given to ACS medications and symptom management. This view removes barriers to discussing sex and sexual health (Williams et al., 2013). Sex positivity changes the focus from sexual infections and diseases to sexual health (Hargons, Mosley, & Stevens-Watkins, 2017).

This study was also guided by a strengths-based approach, which is rooted in positive psychology (Arakawa, Flanders, Hatfield, & Heck, 2013; Seligman & Csikszentmihalyi, 2000) and involves investigating what is done well to allow amplification and fostering of what is working (Arakawa et al., 2013; Harvey, 2014; Seligman & Csikszentmihalyi, 2000). Strengths-based approaches are common in mental health and addictions work, social work, and organizational research but are not limited to these areas (Harvey, 2014). Sex positivity aligns with a strengths-based approach tailored for sexual health.

Methods**Design**

This qualitative study used interpretive description, which blends description using inductive reasoning and interpretation using constructivist thinking (Thorne, 2016). Interpretive description is grounded in the belief that people's experiences are shaped by their perspective and cultural and social forces (Thorne, 2016). Rather than requiring researchers to blind

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themselves to their clinical expertise, interpretive description explores research questions grounded in the clinical (Thorne, 2016). This research question arose during the first author's clinical practice and a review of existing research. For this reason, the use of a research methodology that allows the inclusion of clinical expertise was most fitting.

Participants

We recruited healthcare providers involved in cardiac rehabilitation, including but not limited to registered nurses, physiotherapists, registered dietitians, kinesiologists, psychologists, and physicians. Inclusion criteria included being a healthcare provider employed within a cardiac rehabilitation program. Participants were recruited through an invitational email distributed by the administration at four cardiac rehabilitation programs located in a western Canadian province. A varied group of healthcare professionals from a variety of CRPs was sought to increase the diversity of views and experiences of providing sexual health education. Rather than sample from one CRP and gain insights from one location, a province-wide recruitment approach was adopted to gain a deeper sense of the experiences of providing sexual health education to survivors of ACS in CRPs.

Data Collection

The study was approved by a University Research Ethics Board and all participants were provided with an informed consent form. Participants were reassured that they could withdraw consent up to three months after the interview was completed. No participants chose to withdraw from the study. Participants were also reassured that they could halt the interview at any time. A small honorarium was provided upon completion of the interview.

Semi-structured, digitally recorded interviews were conducted by the first author and transcribed verbatim. A semi-structured, strengths-based, sex-positive interview guide was used.

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Please see Table 1 the semi-structured interview guide. Another data source was the first author's reflective journal documenting perceptions of the interview process with a focus on any theoretical insights and methodological issues.

Socio-demographic information, including age, gender, occupation, years of experience in cardiac rehabilitation, knowledge level of sexual health post-ACS, and confidence level in providing sexual health education was collected by using a short survey. This data assisted in a description of the sample, the interpretation of findings, and provided context for responses.

Data collection was driven by information power (Malterud, Siersma, & Guassora, 2016). The narrow aim, high specificity, use the theoretical frameworks, and strong dialogue balanced the cross-case analysis leading to high information power and a smaller required sample size (Malterud et al., 2016).

Data Analysis

The transcripts and reflective journal entries were analyzed using open, axial, then selective coding and constant comparative analysis (Thorne, 2016). Transcripts and reflective journal entries pertaining to a specific interview were read several times before coding began. Coding began with open coding in a line-by-line fashion (Thorne, 2016). The data was deconstructed to allow for understanding of basic concepts and how these are defined and categorized (Thorne, 2016). Initial codes were the participant's own words until there was a deeper understanding of the data. Axial coding followed to elucidate interactions among categories, conditions that gave rise to these categories and the contexts the categories existed in (Thorne, 2016). Both existing data and ongoing data collection was used to confirm the axial coding. Open and axial coding occurred several times as data collection continued, and

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categories were developed. Lastly, selective coding occurred, where core categories were illuminated and interactions between subcategories were demonstrated.

Credibility was ensured through the evaluation criteria described by Thorne (2016). This study demonstrates epistemological integrity as the knowledge produced flows from the epistemological stance (Thorne, 2016). The findings reinforce existing knowledge and also provides new insights however, these new insights flow from the research question and the data. This study has representative credibility as the findings discuss the provision of sexual health education by healthcare providers in CRPs and the source of the data is healthcare providers who work in CRPs. The first and second author independently analyzed several transcripts, then they compared and contrasted coding to address interpretive authority (Thorne, 2016). Memoing was used to create an audit trail and allow for reflection on coding decisions and transparently demonstrate analytic logic (Thorne, 2016).

Results

Eight healthcare providers from four cardiac rehabilitation program sites volunteered to participate. Five women and three men participated. The purposive sample consisted of four registered nurses and four other allied healthcare providers. Participants' ages ranged from 32 years to 65 years, with a mean age of 44 years. Years of experience ranged from five to 20, with a mean of 9 years. Although over half of the sample rated their knowledge and confidence in providing sexual health education as good to very good, there were wide variations in this self-report. Sexual health education was routinely provided in three of the four sites.

The results of this study are presented below. We identified three inter-related themes and nine categories. The first theme, "Don't say the word – sex!" includes the categories onus on the patient, one of many things to teach, and a taboo topic. This theme describes the limited

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curricular content and the aversion of the healthcare providers to use the word sex. The theme, individual characteristics of the healthcare provider, includes communication skills and knowledge of the material. Finally, the theme of the institutional context includes categories that reflect the organizational philosophies and structures, such as “just sexercise” versus a more holistic approach, siloes, “easy to sweep under the rug,” and the importance of timing.

Theme 1: “Don’t say the word – sex!”

Three categories comprise the first theme, “Don’t say the word – sex!”: onus on the patient, one of many things to teach, a taboo topic. Most participants avoided the word sex. Euphemisms such as “it”, “you know”, and “this” were consistently used in place of “sex”. One participant referred to sexual health as a “difficult conversation” and likened these conversations to discussing advanced care plans.

Although participants agreed that healthcare providers should provide ACS survivors with sexual health education, they still put the onus on the patient to reach out with questions. One participant stated, “I’ve been doing this a long time and I don’t get any direct questions or very very seldom...” (MT1). Another participant shared, “it doesn’t come up super frequently” (MT5), although this participant was adamant that healthcare providers should be providing sexual health education to ACS survivors. This disconnect between responsibility and initiation of delivery exists no matter if the topic was included formally or informally. When included in formal presentations, participants shared that after the presentation, patients are provided the reassurance that they could ask any questions of the healthcare provider. As noted in the first author’s reflective journal, “the need for critical reflection is evident as even though, as healthcare providers, we may think we are providing education, we may not be”. This approach

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put the onus on the patient to reach out with questions, instead of the healthcare provider reaching out to ensure there are no questions.

Several participants noted that there was a large amount of information or curriculum overload in CRPs. They considered sexual health education as only one part of the education needed. “It’s not something that we ask. The amount of time that we’re limited to, like when we’re doing intakes for people coming in, we’re limited to 45 to 60 minutes. So we’re looking more at risk factors for heart disease, family history, any sort of pressing questions they have about stuff that wasn’t clear when they were discharged. Exercise and activity, medication questions, we run through so much time” (MT7). Another participant shared a similar experience, “there’s only so many topics a person has time for” (MT8).

When asked about discussing sexual health with survivors of ACS, these descriptors or adjectives were used: private, uncomfortable, passé topic, taboo, and awkward. All participants recognize that, as a society, we have “...preconceived notions or thoughts that we have or that are instilled in us that perhaps limit us from having these discussions” (MT2). Another participant noted the invisible boundary of acceptable versus unacceptable healthcare concerns: “I think for some people that there’s still a perception ... of this is just really private, like I’ll tell you about my blood pressure and my trouble sleeping, but this part of me or my health is kind of a boundary, I think lots of people don’t necessarily feel comfortable crossing” (MT8).

Sexual health as a taboo topic was not limited to conversations with patients; some participants extended this taboo topic to colleagues. One participant noted, “a lot of people probably aren’t comfortable even bringing it up in, like, sort of staff meetings or saying, ‘Hey, I want to do, you know, an educational session on sex.’ That’s something that’s sort of – could either trigger some sort of just red flag for administration. Like, it might be controversial, or we

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don't really want to advertise that, or it may be just be our perception. They could very well be supportive of something like that" (MT5). Another participant mused that healthcare providers may not bring up sexual health at meetings with colleagues due to sex being a taboo topic, thus limiting conversations and consistency of programming.

Theme 2: Individual Characteristics of the Healthcare Provider

The second theme was the individual characteristics of the healthcare provider that facilitate sexual health education. Two categories associated with this theme were communication skills and knowledge of the material.

Participants noted the importance of communication skills in providing sexual health education to ACS survivors. MT5 stated, "Healthcare providers working in cardiac rehab have reasonable communication skill sets." One participant shared their comfort in presenting sexual health education to a group with a caveat that they were comfortable with public speaking. This participant enjoyed being asked questions, especially new questions they may not have the answer to, "I like that because then I know what they're thinking and feeling and what questions they have and then I can, you know, research the answer if I don't have. And maybe it's something that I add to the presentation, or at least I know about it where I can bring it up and talk about it" (MT4). Another participant noted that comfort grows with experience providing sexual health education, "when you get that first couple of ones out the way and you find your niche, find your flow" (MT7). This was similar to another participant, "it became normal, like normal and once you start talking to people about it, and it's easier to talk about it in the future than if a person never has that exposure" (MT8).

To provide evidence-based sexual health education, all participants expressed that they must be equipped with knowledge. MT7 stated: "How do you get your staff ready to talk about it

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if nobody's ever taught them how to?". Participants noted that information about sexual health and sexual health education was rarely provided in their formative and continuing healthcare professional education.

The general lack of formal education led participants to independently seek out knowledge sources. One participant combined knowledge from years of nursing experience with formal education sessions, reading, and posing questions to colleagues. A spirit of inquiry was important, as MT6 noted "I just look [it] up – if I hear something then I like to read about it". Another participant shared that reliable information related to sexual health was difficult to locate and a graduate degree was helpful in providing the skills to locate evidence-based literature. In the reflective journal, the first author wondered, "is this the ability to simply locate literature or to do so in a timely fashion as well?".

Theme 3 - Institutional Context

The theme of institutional context was comprised of four inter-related categories: "Just sexercise" versus holistic approach, siloes, "easy to sweep under the rug," and the importance of timing. The philosophical underpinnings and structure of the institution was noted to influence sexual health education. This theme includes the categories that are foundational to the practice of each individual healthcare provider and that influence the provision of sexual health education from a planning and administrative lens.

All participants talked about sex in relation to exercise and one participant coined the phrase, "Just sexercise." Skills taught for monitoring exertion during exercise, such as the talk test or perceived level of exertion, were included in the provision of sexual health education. Participants also identified that survivors of ACS linked sex and sexual health to exercise. Patients' questions shared by one participant were related to sexual activity and symptom

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management, including, “How hard can I go?” and “Will I have chest pain? When discussing sexual health education, patients focused on the activity component of sexual health. An allied healthcare provider (without a disciplinary exercise focus) related sexual health to physicality and physical limitations.

All participants mentioned the non-activity aspects of sexual health such as relationships, medications affecting sexual health, needing to re-establish their identity, quality of life, communication, and sexual activity beyond the typical definition of sex as intrusive. Although these aspects of sexual health were discussed in the semi-structured interview, they were not included in the sexual health education provided to patients. Only one participant explicitly related sexual health to a new self-image and beyond the physical. As noted in the reflective journal of the first author, “simply defining sexual health may be incredibly useful”.

Participants acknowledged that CRPs were siloed, which limited their understandings of what was being taught by others at the same site. Several participants were unsure of what others taught during their designated portion(s) of the program. Often, participants were not been able to attend programming provided by others to gain an understanding of the entire CRP. Two participants, from two separate sites, noted that different patient groups in the same program may receive different education based on who led the group.

As MT5 noted, “it's not – taboo isn't necessarily like the most significant influencing factor in not really talking about it. I think it's just habit”. Participants acknowledged that if sexual health education was not consciously included in CRPs, it was “easy to sweep under the rug” or in other words, it would be invisible and excluded. MT4 noted, “It's one of those subjects that a lot of CRPs don't really spend too much time on”. In contrast, another participant (MT7) recalled when starting their position in cardiac rehabilitation, “the sex sort of business was

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always, for as long as I've been there, it's always been included in our presentations... If we can keep the presentations in... I think that would be great as well, but I mean I think what we should say people are still having great sex until their 90's. So... why not give them the information if they need it?"

Both the timing and materials available were important categories and factors in the experience of providing sexual health education. When CRPs routinely provided sexual health education, these participants observed that sexual health education was provided after patients had opportunities to build relationships and trust with each other and with healthcare providers. For example, sexual health education was provided after three to four encounters, as "you sort of build these relationships with people around you as well and it usually sort of takes a good few classes" (MT7). The importance of time was also noted by MT8, who expressed that, "Some people I've been working with for even a while and all of a sudden they bring up, wait a second I'm, I don't know, having sex with my partner. And it's like, oh ... you never mentioned that before...".

Discussion

The findings of this study provided concrete examples and suggestions for healthcare providers to incorporate sexual health education in CRPs. The findings also shed light on systematic, contextual, and individual policy and practice changes required to bring sexual health education into the mainstream of patient education.

Contrary to the findings by Ghish et al. (2014), sexual health education was provided in three of the four sites. This finding, in itself, provides opportunity for sharing strategies that have led to the provision of sexual health education. It is important to acknowledge that CRPs are situated within a non-sex positive world (Arakawa et al., 2013; Hargons et al., 2017), so

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including sexual health education may conflict with engrained cultural norms. Healthcare leaders and administrators may consider including the importance of sexual health education in mission and vision statements and consciously promote sexual health education. This inclusion may be challenging in some institutions with barriers such as religious affiliations (Barnason, Steinke, Mosack, & Wright, 2013). Administrators may consider having open conversations with healthcare providers about evidence-based practice and encourage the need to follow guidelines when planning, implementing, and evaluating programming to ensure a balance between meeting patient needs and following institutional visions.

When healthcare leaders and administrators have open conversations and plan programming to meet guideline-recommendations and patient needs, sexual health education may be harder to “sweep under the rug”. Recognizing that sexual health is one of the many topics that require attention in CRPs allows for the planning and appropriate timing of delivery of this education. Lack of time was a consistent theme when discussing providing sexual health education during a hospital stay (Akdolun & Terakye, 2001; Barnason et al., 2013; Steinke & Patterson-Midgley, 1998) and survivors of ACS have endorsed that sexual health education was not a priority while in hospital (Søderberg, Johansen, Herning, & Berg, 2013; Timmins & Kaliszer, 2003). Therefore, CRPs are the appropriate location for sexual health education and cardiac rehabilitation programs must prioritize, including it in their programming.

Open conversation among healthcare providers related to sexual health and sexual health education may break down the siloes and increase understanding of who is providing aspects of sexual health education. The findings indicated that there is an exercise and activity focus to current offerings of sexual health education; however, healthcare providers need to be encouraged to take a more holistic view of sexual health. Including mental health experts in these

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conversations may help to steer the education to include discussions that reflect the WHO's definition of sexual health as including not only the physical or "the absence of disease, dysfunction or infirmity", but also emotional, mental, and social aspects of sexuality (2006).

Participants in this study indicated that sexual health education is important and that healthcare providers should initiate these conversations. This finding is consistent with existing literature (Barnason, Steinke Elaine, Mosack Victoria, & Wright David W., 2011; Steinke, Mosack, Barnason, & Wright, 2011). It is vital for healthcare providers to critically reflect on their practice and ensure they are actively providing sexual health education and following up with patients. Survivors of ACS have voiced that they wanted healthcare providers to initiate conversations (Abramsohn et al., 2013) and participants of the current study supported this stance; however, healthcare providers may not be as actively or effectively providing sexual health education as perceived by survivors of ACS. Leaving the opportunity for ACS survivors to follow up with questions versus actively seeking out and asking ACS survivors what questions they have is a nuanced difference but an important one. In a world where it isn't "ok" to talk about sex (Lindau et al., 2014; Zeydi et al., 2016), healthcare providers must reflect and seek assistance with their discomfort to provide a sex-positive environment to allow ACS survivors the opportunity to ask questions.

The need for communication skills is a novel but expected finding if considered alongside confidence. Confidence in providing sexual health education was often reported in literature (Barnason et al., 2011) however there is a lack of literature describing how one becomes confident or what makes up confidence. Confidence may be, in part, related to presenting and communication skills. If communication skills are fostered, healthcare professionals may have an easier time providing sexual health education and reaching out to

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answer questions related to sexual health compared to those who do not have the same strength in communication.

The need for knowledge of the current and best evidence was consistent with previously reported findings (Ivarsson, Fridlund, & Sjöberg, 2009; Özdemir & Akdemir, 2008; Rahim, Allana, Steinke, Ali, & Khan, 2017).. Healthcare providers need ongoing education, which was suggested by one participant in this study and is also reflected in previous literature (Barnason et al., 2013; Steinke & Patterson-Midgley, 1998). The findings point to the need for healthcare providers to recognize the three pillars of evidence-informed practice, clinical experience, patient preference, and research evidence (Melnik & Fineout-Overholt, 2015) and to work together to seek out evidence and share clinical experiences. Combining these with input and feedback from ACS survivors on what they wish they knew about sexual health after surviving ACS would provide cardiac rehabilitation programs with a strong foundation.

The usual focus of sexual health education is deficit-based (Arakawa et al., 2013); however, the findings of this study pointed to healthcare providers equating sexual health with improved physical activity or physical health. This unique finding may be related to the focus in cardiac rehabilitation on behaviour change and creating a positive environment to support change (Ghisi et al., 2014). This focus suggests that the participants in this study worked in strengths-based environments and thus, their education programming may incorporate a strengths-based approach. The sexual health education described by the participants in this study cannot be referred to as fully strengths-based however, because of its limited scope. Due to the focus on only one facet of sexual health, the physical, ACS survivors are not drawing on their mental, emotional, and social selves and are not benefiting from the strengths they have in those areas. Because sex-positivity is closely tied to strengths-based approaches, cardiac rehabilitation

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programs may be uniquely situated and at an advantage in their ability to adapt and provide holistic, strengths-based, sex-positive sexual health education.

This study has several strengths and limitations. Strengths include participants from four cardiac rehabilitation sites, the use of guiding frameworks for both the design of the study and the data analysis, and data triangulation via the inclusion of reflections from the first author's reflective journal. The final strength lies in the use of a qualitative approach, which allowed for interpretation of the narrow perception of sexual health among healthcare providers as "just sexercise".

Limitations include the small sample size, the focus on CRPs in one western Canadian province, and the lack of participation of one cardiac rehabilitation site in this province. Future studies are warranted to focus on patients' perspectives of sexual health education, including their experiences of receiving sexual health education and their specific needs related to information provided. By combining these patient perspectives with participant observation, the findings may support the inclusion of sexual health education in CRPs.

Conclusion

The findings of this study indicate that the topic of sexual health, along with individual and institutional factors play a role in healthcare providers experiences of facilitating sexual health education among ACS survivors. The limited view of sexual health taken by the healthcare providers (i.e. "Just sexercise") suggests the importance of clearly and broadly defining sexual health to ensure a holistic approach is taken for sexual health education. A strengths-based, sex-positive framework is useful both when investigating these experiences and when providing sexual health education. These findings can be used by CRPs to guide the inclusion of this guideline-directed patient education to reduce the burden of fear, depression,

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and anxiety (Abramsohn et al., 2013; Amsterdam et al., 2014; O’Gara et al., 2013 Steinke et al., 2013) and improve the quality of life of ACS survivors.

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Appendix

1.	Tell me about a scenario when you provided sexual health education to a person with ACS.
2.	What questions have ACS patients and/or their partners asked you about their sexual health?
3.	How did those questions about their sexual health make you feel?
4.	Please tell me how you assess patients' and/or their partners' understandings of sexual health.
5.	What information did you provide to patients with ACS and their partners?
6.	How did you provide this information? (written, verbal etc if asked for clarification)
7.	Tell me how you became or will become confident and competent in the provision of sexual health education.
8.	In an ideal world, what factors are available/needed to support sexual health education in cardiac rehabilitation programs?
9.	Is there anything else that you would like to share?

Table. Sample of semi-structured interview guide

Chapter 4: Conclusion

A summary of the scoping review and qualitative research study findings are presented in this chapter, followed by a discussion integrating the findings of the thesis as a whole with existing literature. A review of the strengths and limitations of the study is followed by a reflection on the guiding frameworks and methodology, then recommendations are offered for future research. The implications of the thesis on health policy and practice are presented along with knowledge translation strategies, followed by a summary and closing reflection.

The purpose of this thesis was to advance understanding about the provision of sexual health education to survivors of ACS. The objectives of this thesis were: 1) to review the existing literature related to factors shaping the provision of sexual health education for adults who have survived ACS and 2) to explore health care providers' experiences of providing sexual health education to ACS survivors in CRPs. A paper-based thesis was employed to meet these objectives. Objective one was approached through the scoping review of the current literature related to the provision of sexual health education (please see Paper #1 by Hyde, Martin and Rieger, 2019). Objective two was approached through a qualitative study using interpretive description exploring health care provider's experiences of providing sexual health education to survivors of ACS in CR (please see Paper #2). Together, the scoping review and qualitative study provided unique perspectives of the provision of sexual health education to ACS survivors and advanced the understanding of the same.

Summary of Scoping Review

In the scoping review (please see Paper #1), we identified macro, meso, and micro level factors that influenced the provision of sexual health education to survivors of ACS (Hyde, Martin, & Rieger, 2020). At the macro level, society and culture were found to influence the

provision of sexual health education (Hyde et al., 2020). The healthcare environment and limited healthcare provider education were the meso level influencing factors. The micro level factors included the individual healthcare provider-ACS survivor relationship, including the partner, bias, and role clarity (Hyde et al., 2020). Viewing these findings through the lens of sex positivity highlighted the interrelationships between the levels and the deficit-focus of existing literature (Hyde et al., 2020). Scoping reviews can be undertaken to identify literature gaps for future research (Arksey & O'Malley, 2005) and this scoping review highlighted the deficit-focus in the provision of sexual health education (Hyde et al., 2020). This gap in the literature provided the basis for the subsequent qualitative research study.

Summary of Qualitative Research Paper

The interpretive description study provided new insights into healthcare providers' experiences of providing sexual health education in CRPs (see Paper #2). Three themes and nine categories were identified. The themes include the topic of sexual health, the individual healthcare provider characteristics, and the institutional context. Findings suggested that for sexual health education to occur, the administrators and institution must explicitly support the provision of sexual health education, ensure clarity of roles, encourage collaboration between professions and departments, and work with programming to ensure that sexual health education is provided at the appropriate time during the CR program.

Participating healthcare providers identified that they must have knowledge of sexual health and they require effective communication skills in order to provide sexual health education. The topic of sexual health itself must be thoughtfully included by healthcare providers and the onus on the patient be reduced or removed. Sexual health is one of many topics to be covered so its inclusion in programming must be thoughtful and purposeful. Finally, the taboo

nature of discussions of sexual health must be acknowledged and recognized as cultural or societal to allow for conversations and discussions on how to overcome the preconceived notion that it is not appropriate to discuss sexual health.

Discussion and Synthesis of Paper #1 and #2

Although distinct work, the findings of the scoping review and the qualitative research study were integrated to discuss the findings of the thesis as a whole. The findings of this thesis provide richer descriptions of the factors shaping providing sexual health education and the experiences of providing sexual health education to ACS survivors in CR. The findings of the scoping review and the findings of the qualitative research study will be compared and contrasted in the following section and the fit with existing literature will be explored.

Multiple macro, meso, and micro level factors found in the scoping review were reflected in the findings of the qualitative research study. Sexual health education occurred in three of the four participating CRPs. This finding contradicted previous research that indicated that including sexual health education in CRPs was rare (Ghisi et al., 2014). This finding also suggests that the macro level of society and culture found in the scoping review (Hyde et al., 2020) effected these three CRPs differently than other areas of society. The non-sex positive world these CRPs exist in (Arakawa et al., 2013; Hargons, Mosley, & Stevens-Watkins, 2017) would encourage the lack of inclusion of sexual health education. The reason for inclusion of sexual health education in the programming of these CRPs was not explored in this thesis; however, this would be an interesting topic for future research.

The macro level of society and culture was also clearly described by participants when they discussed the taboo topic of sexual health. Participants noted that sexual health is “easy to sweep under the rug”, or exclude, again noting that society has created a bubble of silence

around sexual health that does not allow this topic in patient-provider conversation. This finding has been reported previously (Abramsohn et al., 2013; Barnason et al., 2013; Lindau et al., 2014; Zeydi et al., 2016). This bubble of silence permeates the following factors and experiences and influences the provision of sexual health education.

The meso level of the healthcare environment and limited healthcare provider education was also consistently reported by participants in the current study. Individual characteristics of the healthcare provider include knowledge of the material of sexual health, which has been reported by numerous previous studies (Barnason et al., 2013; Ivarsson, Fridlund, & Sjöberg, 2009; Özdemir & Akdemir, 2008; Rahim et al., 2017; Shuman & Bohachick, 1987; E. E. Steinke & Patterson-Midgley, 1998; E. E. Steinke & Patterson, 1995). The further reporting of this finding suggests the need to engage formal educational institutions to ensure that sexual health education is provided to healthcare providers who will be providing this to patients. Engaging institutions in providing sexual health education as on-going education would also assist in knowledge translation and bridge this gap identified since the 1980s. Sexual health being one of many things to teach reflects the healthcare environment. Priority is habitually given to other topics, leaving no time for sexual health education to occur (Akdolun & Terakye, 2001; Barnason et al., 2013; Ivarsson et al., 2010; E. E. Steinke & Patterson-Midgley, 1998; E. E. Steinke & Patterson, 1995).

The micro level includes the individual healthcare provider-ACS survivor relationship and role clarity, which were reflected in the current study. The importance of timing of sexual health education also relates to the healthcare provider-ACS survivor relationship. It has previously been reported that healthcare providers are concerned of evoking a negative emotional response in the ACS survivor by bringing up sexual health (Barnason et al., 2013; E. E. Steinke

& Patterson-Midgley, 1998). The current study suggests the importance of providing time for this relationship to grow prior to providing sexual health education. Further research investigating if this time would reduce these previously reported concerns is warranted.

Also important in the relationship is that healthcare provider often inadvertently placed the onus of sexual health education on the patient. The importance of role clarity was reflected in the findings of “sexercise vs holistic approach” and siloes, both of which required the healthcare team to clearly identify the education plan and to determine who is best to provide this education. Participants in the current study agree with existing literature reporting that healthcare providers should initiate sexual health education (Barnason, Steinke Elaine, Mosack Victoria, & Wright David W., 2011; E. E. Steinke et al., 2011; E. E. Steinke & Patterson-Midgley, 1996b). Clear roles would highlight the diversity of the team and could reduce the focus on the physical aspects of sexual health and increase the focus on other aspects of sexual health, such as the emotional, mental, and social.

The finding of the qualitative research study of the need for communication skills is a novel finding not reflected in the scoping review or existing literature. Multiple previous studies report on the confidence and comfort of healthcare providers in providing sexual health education (Goossens et al., 2011; Jaarsma et al., 2010; Kolbe et al., 2016). One study found that nurses working in CRPs were more comfortable providing sexual health education compared to nurses working in acute care (E. Steinke & Patterson-Midgley, 1996) however the reason for this comfort was not explored. Higher confidence among nurses working in CRPs compared to acute care was found in another study (Barnason et al., 2011) however the reason for this difference in confidence was again not explored. The manner of provision of sexual health education was not often discussed in the literature reviewed however it would be interesting future work to

determine if the discomfort with providing sexual health education is at all related to the presenter's communication skills.

The findings of the two papers strongly supported one another, with novel findings in each. This consistency suggests the findings were strong with promising use of a sex positivity lens and a strengths-based approach. Future research including the patient voice would lend even more strength to these findings and would set the stage for an intervention study. There were findings from the scoping review and the qualitative research study that cannot be integrated. The scoping review included the patient voice, so the findings of include my partner cannot be integrated with the qualitative research study. Future qualitative work with patients should reflect on this finding.

Strengths and Limitations of Thesis

The strengths and limitations of the scoping review and of the qualitative research study are presented below. Strengths of the scoping review included the robustness of the scoping review procedure as three reviewers extracted and analysed the data. Second, the findings were supported by the use of theoretical frameworks. Third, the results indicated that sexual health education was an under-researched topic that is significant to health of Canadians as well as the practice of healthcare providers.

There were several limitations noted for the scoping review. First, there is the possibility of missed articles, which is true of any literature review. Second, the results reflect North American culture and healthcare practices as the majority of the studies took place in North America. Third, scoping reviews do not involve assessing the quality of the included studies so there is no assessment of the quality of the studies included in this review. The fourth limitation

is that the included studies focused solely on the partnered heterosexual population of ACS survivors, ignoring single adults and LGBTQ2S people.

Strengths were also noted for qualitative research study. First, this study included participants from multiple sites and disciplines. Participants from four CR sites in a western Canadian province were included. Second, the use of guiding frameworks for both the design of the study and the data analysis added rigor to the study. The interview questions were designed in a sex-positive, strengths-based manner and the data was analyzed using the same lens. Third, several data sources (transcripts, reflective journal) added rigor to the study. Finally, a qualitative approach facilitated the collection and analysis of rich data that highlighted how healthcare providers narrowly perceived sexual health among ACS survivors as “just sexercise.”

Five limitations were noted for the qualitative research study, including: the small sample size, the geographic limitation of only including CRPs in one province, the lack of participation of one CRP, the exclusion of patients and their partners, and the lack of fieldwork to affirm or negate the participants’ reports.

Reflections on Guiding Frameworks and Methodology

Two guiding frameworks were used in this thesis, sex positivity and a strengths-based approach. The methodology employed in the qualitative research paper was interpretive description. Below is a reflection on the benefits and drawbacks of each guiding framework and the methodology of interpretive description.

The use of sex positivity as a guiding framework was, overall, an asset. This guiding framework was permissive in that it required me to address sexuality and sexual health directly and without apology. This perspective has shifted my thinking and helped me to clearly discuss and genuinely present my research. It would have been beneficial to discover this framework

earlier in my graduate studies as the permission it provides in discussing sexual health would have empowered me. This framework does have drawbacks, however. Sex positivity lacks a clear definition and the descriptions change based on authors, which makes utilizing and understanding sex positivity challenging. As well, sex positivity has not yet moved into the mainstream of health research, which makes providing rational support for its use more difficult.

The guiding framework of a strengths-based approach provided a fresh perspective on research related to the provision of sexual health education. The small change in this growing perspective of asking “what is working”, instead of “why can’t you”, provides an incredible shift in thinking which has exciting repercussions. The scope of this thesis did not allow for the use of appreciate inquiry, which is a drawback, as using the appreciate inquiry cycle would have engaged the participants further and empowered them to identify and foster factors that facilitate the provision of sexual health education. This thesis provides support for performing a future appreciate inquiry as participants in the qualitative research study were able to identify factors that facilitate the provision of sexual health education, which is novel. Prior to this study, it was not known if there were factors that facilitate the provision of sexual health education.

The use of interpretive description made using a qualitative methodology approachable and less intimidating. Interpretive description is designed for an applied discipline, such as nursing, and its methods felt familiar to this novice researcher. The theoretical underpinnings of interpretive description, constructivism, are logical to me as I have seen people who are similar “on paper” but who make such different decisions in the same situation. When asked about the reasons behind their decisions, they share anecdotes related to their friends, families, coworkers and so forth. Their differences are socially constructed. Rather than requiring me to be blinded to my clinical knowledge, interpretive description allows the question to grow from that clinical

knowledge. This is also why this methodology is approachable. I am not required to blind myself as a clinician and being required to do so as a novice researcher would have removed a large portion of who I am and my confidence. Rather than having rigorous rules that must be followed, interpretive description shared a roadmap that required me to make and defend choices. This provided enough freedom to be approachable but also required me to make thoughtful choices. Instead of doing something because it is part of the required process, I had to understand why.

The guiding frameworks and methodology strengthened both this thesis but also me as a researcher. They gave me permission to make this thesis my own and required me to understand and defend decisions. The guiding frameworks and methodology were overall incredibly helpful in both completing this thesis and helping me to grow as a researcher.

Recommendations for Future Research, Policy, and Practice

Future research can build upon this work to further assist in bringing sexual health education into the mainstream of patient education. This future work involves both qualitative and quantitative research and must include the patient voice. Suggestions for future research are described below:

- The interpretive description research study demonstrated that three of four CRPs participating included sexual health education. The reason for inclusion of sexual health education in the programming of these CRPs was not explored in this thesis; however, this would be an interesting topic for future research.
- The interpretive description research study explored the experiences of healthcare providers. Further qualitative research focusing on the patient perspective of their experiences of receiving sexual health education is needed to understand this experience and how it can be improved.

- Further work is also required with a broader patient population, including single adults and individuals or couples from the LGBTQ2S community to ensure that the diverse patient voice is heard. Both qualitative and quantitative work is required focused on this marginalized patient population.
- Specific sexual health education requirements are outlined in guidelines, however there is no standard for the materials used or how this information is shared or presented to patients. Educational materials and dissemination possibilities should be developed and trialled with both healthcare providers and patients to determine what is optimal.
- Both the scoping review and the interpretive description highlighted the need for ongoing education for healthcare providers related to sexual health. Work with sexual health experts to develop and test education programming may be beneficial.
- Formal education programs may consider including sexual health. Further work is warranted with educational institutions and sexual health experts to develop and test sexual health education using mixed methods.
- The number of guidelines published related to sexual health and the lack of translation into practice suggests the need for further initiatives that support knowledge translation. Utilization of both integrated and end-of-grant knowledge translation approaches, similar to the Canadian Institute for Health Research's requirements may assist in moving guidelines from words into practice.

Implications

In this section, the implications of the paper-based thesis are discussed. Due to the nature of a paper-based thesis, redundancy with the implications noted in the published manuscripts is expected and acknowledged. The findings of this thesis have broad implications, from bedside

practice to policy. The implications of this thesis can be broken down to implications for ACS survivors and implications for healthcare providers.

Implications of the Scoping Review

Two implications were noted for the scoping review. First, the review is the first known to investigate the factors influencing the provision of sexual health education using a sex positivity lens (Hyde et al., 2020). This lens assisted in the identification of underlying, intersecting influences that can be further researched to enhance the provision of sexual health education (Hyde et al., 2020). Understanding the barriers of provision of sexual health education allows for the conscious effort to either remove barriers or circumvent them. Some barriers, such as the society and culture and personal bias (Hyde et al., 2020), are much more challenging to navigate and alter. Other barriers, such as lack of education and role clarity (Hyde et al., 2020), are within the sphere of control of the healthcare profession and are more easily removed or altered. As these smaller, more accessible barriers are removed, the larger barriers may become smaller and more amenable to change.

The second implication is the positive effect of the provision of sexual health education to ACS survivors (Hyde et al., 2020). Canada has a high burden of heart disease (Public Health Agency of Canada, 2018) and without sexual health education, ACS survivors report reduced return to sexual activity (Drory et al., 2000; Lindau et al., 2012) and increased depression, anxiety, and fear with less prevalent sexual activity (Eyada & Atwa, 2007; E. E. Steinke, Jaarsma, et al., 2013; Wiklund et al., 1984). If barriers to providing sexual health education are removed and this guideline-suggested education is integrated into practice, there may be a reduction in depression, anxiety, and fear among a growing population of ACS survivors (Hyde et al., 2020).

Implications of the Qualitative Research Study

Five implications are noted in the qualitative research study. First, sexual health education needs to be balanced with other education required. Sexual health is one of many important topics that must be covered with patients, so appropriate time and resources must be allocated to ensure inclusion but not at the expense of exclusion of other important education. Second, healthcare providers need communication skills and knowledge of sexual health to allow them to provide this education. If a healthcare provider is not comfortable communicating in front of a large group of ACS survivors or if they are unaware of the information they need to convey, they are not going to be able to provide sexual health education. Third, it is important to think beyond the physical and understand sexual health from a holistic view. Sexual health is more than simply a physical act and includes emotional, mental, and social aspects, as noted by the World Health Organization's 2006 definition of sexual health. Fourth, siloes that exist in healthcare institutions need to be broken down to bring clarity and transparency to each healthcare provider of not only their role but the roles of their coworkers. This will allow for integration of the strengths and knowledge bases of the variety of healthcare professions and should lead to more holistic sexual health education. Fitness professionals may be most comfortable focusing on the physical aspects of sexual health, while psychologists focus on the emotional and mental, and nurses the social aspects of sexual health. Lastly, it would be beneficial for healthcare providers in CRPs to purposefully and thoughtfully provide sexual health education in their programming. Explicitly including sexual health education on calendars, ensuring discussions of topics to include related to sexual health occur at staff meetings, and providing ongoing education related to communication skills and sexual health are ways CRPs may ensure sexual health is not swept under the rug.

Implications for ACS Survivors

There are several implications for this thesis as a whole for ACS survivors. As a whole, this thesis may assist healthcare providers in meeting the needs of ACS survivors. ACS survivors share that they want to receive sexual health education (AltIok & Yilmaz, 2011; Lindau et al., 2014) and this thesis provides healthcare providers with ways to meet this need. As noted, ACS survivors report reduced return to sexual activity (Drory et al., 2000; Lindau et al., 2012) and depression, anxiety, and fear are more prevalent when sexual activity is reduced (Eyada & Atwa, 2007; E. E. Steinke, Jaarsma, et al., 2013; Wiklund et al., 1984). This negative impact on quality of life can be moderated by including sexual health education, as education has a positive impact on behaviour change (Ghisi et al., 2014). Canadians are an aging population (Statistics Canada, 2018) and the risk of ACS increases with age (Public Health Agency of Canada, 2018). If sexual health education is not provided to the growing number of ACS survivors, a large proportion of Canadians will spend their golden years with a reduced quality of life.

Implications for healthcare Providers

This thesis as a whole presents to healthcare providers both barriers and facilitators of sexual health education. This is a new view as the majority of the existing literature takes a deficit focus. While identifying barriers is important to allow for their reduction or removal, it is equally important to take a strengths-based approach to identify and investigate facilitators. The deficit-focus of the current literature has left us with patients reporting receiving little to no sexual health education (AltIok & Yilmaz, 2011; Brännström et al., 2014; D'Eath et al., 2013; Lindau et al., 2012, 2014) and CRPs reporting not including sexual health education in their programming (Ghisi et al., 2014). A strengths-based approach changes the conversation from

why we cannot to how we can and provides ideas and tools for other healthcare providers to allow them to add sexual health education to their daily practice.

This thesis also provides tools for institutions to assist them in ensuring the inclusion of sexual health education. As with individual healthcare providers, the focus in the extant literature on the barriers has not led to inclusion of sexual health education in CRPs (Ghisi et al., 2014). Identification of facilitators of sexual health education may provide tangible points that assist in the provision of this education. Both the scoping review and the qualitative research study explore and discuss structural and institutional-level factors that can facilitate the inclusion of sexual health education. The findings of this thesis suggest the provision of continuing education related to sexual health to healthcare providers with a focus on strategies to improve their communication skills. Including sexual health explicitly and thoughtfully timed in programming and discussions at staff meetings, leaders in CRPs may shift the culture from sexual health being a taboo topic to one that is openly discussed and accepted. Ensuring siloes are broken down and the variety of healthcare providers working together integrate their education and understand not only their role, but the roles of their coworkers may lead to a more holistic provision of sexual health education.

Knowledge Translation Strategies

There are two guidelines (Amsterdam et al., 2014; O’Gara et al., 2013), a scientific statement (Levine et al., 2012), and a consensus document (E. E. Steinke, Jaarsma, et al., 2013) that have not led to consistent inclusion of sexual health education in CRPs. Targeted knowledge translation activities are required to ensure this work reaches a variety of knowledge users.

Publication of findings in peer-reviewed journals and presentation at academic conferences is key for dissemination to researchers. As identified above, there is a need for considerable further work including gaining the patient voice and ensuring diversity in the patients represented. The scoping review was published in *Patient Education & Counseling* and the qualitative research study will be submitted for publication shortly. The qualitative research study proposal has been shared at several international and national, interdisciplinary and nursing-focused academic conferences. The findings will be shared at academic conferences as soon as possible.

The findings of the qualitative research study were also shared in the form of a report with the all participants and the directors or administrators of participating CRPs. This report presented findings from the study with tangible facilitators of providing sexual health education in CRPs. The author will work with the CRPs to assist in relationship development and sharing of expertise. There are local experts who would be able to provide ongoing education related to sexual health and communication. The framework for a mentorship program can also be shared to provide mentoring from those comfortable providing sexual health education. Programs such as mentorship, continuing education related to sexual health and communication, along with clear direction for inclusion of sexual health education by CRPs will assist with the ongoing use of the thesis work.

Creative knowledge translation approaches such as a visual infographic and a podcast or webinar may help to share the findings of this thesis with healthcare providers. These approaches may present the findings in a format of suggestions of ideas that allows healthcare providers to understand the tangible takeaways and apply them to their practice.

Chapter Summary

In this conclusion chapter, I provided an overview of Paper #1, the scoping review, and of Paper #2, the qualitative research study. I then synthesized the two papers in a discussion, which integrated existing literature and reviewed the strengths and limitations of the thesis. I then provided future research recommendations and shared the implications of the thesis on health policy and practice along with knowledge translation strategies.

Reflections

This research project has opened my eyes to the diverse and complex healthcare system outside of acute care. Understanding the patient journey provides such clarity and allows me to more effectively perform my part of their care. The relationships built were meaningful and deep despite the brevity of the interaction because we sat down with the shared goals of learning and sharing knowledge to improve patient care and the patient experience. This project was conceptualized for several years and the speed at which it unfolded was shocking. In a time of healthcare consolidation and change, it was incredibly refreshing to sit and discuss how we are doing a good job and how we can help other healthcare providers do the same. This project stoked my love of nursing and the diversity of healthcare professions. Whether caring for a patient at the bedside, working in education, caring for patients in the community, or working at a policy level, the diversity extends only to the tasks being performed. We all work towards one goal, excellent patient care to provide those we serve with what they need to thrive.

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Appendix A

Invitational Email

Hello, My name is Emily Hyde and I am a graduate student at the University of Manitoba. My thesis project will explore healthcare providers' experiences providing sexual health education to ACS survivors. A notice that describes the project is attached to this email. To be eligible to participate in this study, you must be a health care professional working in a cardiac rehabilitation setting. This research has been approved by the University of Manitoba Health Research Ethics Board. Any concerns or complaints can be directed to the Human Ethics Coordinator at 204-788-3255 or email: bannatynereb@umanitoba.ca.

Would you be willing to talk about your experiences of providing sexual health education to ACS survivors? I would like to hear your story.

I will spend about an hour with you in a private location (your home, your office) or you may opt to participate by Skype or Zoom. I will ask you to complete a brief demographic form that should take 5 minutes of your time and then I will ask questions about your experiences providing sexual health education to ACS survivors. The interview will be recorded using a small digital recording device. This information will be used to explore sexual health education with individuals with ACS. I will be the only person who will be aware that you participated in the study. Your name and identity will be protected by deleting "real" names in any study documents. Any identifying features of your stories will be removed or altered so that no one will be able to identify you as a participant in this project. The research site will not be referred to by name; rather, it will be referred to as CR programs in a Western Canadian province. You can choose not to answer any question(s) or you can withdraw from the study at any time with no untoward consequences. At the end of the interview, you will receive a \$25 gift card to Starbucks. Even if you decide not to finish the interview, you may still keep the \$25 gift card to Starbucks. To arrange an interview or get more information about this study, please call (xxx) xxx-xxxx or email: @myumanitoba.ca

Appendix B

Consent Form



UNIVERSITY
OF MANITOBA

Rady Faculty of
Health Sciences

**Manitoba Centre for Nursing
and Health Research (MCNHR)**
College of Nursing
Helen Glass Centre for Nursing
Winnipeg, Manitoba
Canada R3T 2N2
Telephone 204-474-9080
Fax 204-474-7682

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM

Individual Interview

Title of Study: “Health care professionals’ experiences of providing shaping sexual health education for adults with acute coronary syndrome in cardiac rehabilitation programs: An interpretive description”

Principal Investigator: Emily Hyde, Masters student, Faculty of Health Sciences,

College of Nursing, University of Manitoba, email: @myumanitoba.ca, phone: (xxx) xxx-xxxx

Co-Investigator: Dr. Donna Martin, Dr. Kendra Rieger, & Dr. Reece Malone.

Sponsor: not applicable

Funder: College of Nursing Endowment Fund Graduate Student Research Grant

You are being asked to participate in a research study involving individual interview. Please take your time to review this consent form and discuss any questions you may have with the study staff, your friends, or family before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain any words or information that you do not clearly understand.

Purpose of this Study

This research study is being conducted to study is to investigate health care professionals’ experiences of sexual health education with acute coronary syndrome survivors in cardiac rehabilitation.

Participants Selection

You are being asked to participate in this study because as a healthcare provider employed at a cardiac rehabilitation site. Sexual health education is included in guideline recommendations for survivors of acute coronary syndrome and it has been suggested in previous studies that cardiac rehabilitation is the time that survivors wish to learn about their sexual health. A total of 10 participants will be asked to participate.

Study procedures

- The method of data collection for this study will be an individual interview
- Participation in the study will be for one hour.
- The interview will be conducted by the principle investigator
- You will be asked some questions relating to your experience with providing sexual health education to survivors of acute coronary syndrome. These questions will help us to

better understand experiences of providing sexual health education to develop an understanding of how to successfully provide this education.

- The sessions will be audiotaped, and the audiotapes will be transcribed by a transcriptionist. from Transcript Heroes to ensure accurate reporting of the information that you provide.
- Transcribers will sign a form stating that they will not discuss any item on the tape with anyone other than the researchers.
- The transcriptionist will remove your name and any identifying information from the text of the transcripts before sending it to Ms. Hyde. Ms. Hyde will assign a fictitious name to your transcript. Ms. Hyde will document her thoughts about the interview process in a reflective journal. Your real name or identifying features will NOT be included in the reflective journal. The reflective journal will be assigned the same fictitious name as your transcript. As an example, Ms. Hyde will be the only research team member that will be aware that Albert is participant #1, Bernice is participant #2, Connie is participant #3 etc. To remove identifying features, Ms. Hyde will revise the text within the document. For example, a participant may be identifiable by their position as a physiotherapist; the text will be reworded to reflect the participant's position as a healthcare provider.
- The interview transcript and reflective journal (no names, no identifying features) will be uploaded onto a password protected file on the shared drive at the University of Manitoba, accessible only to Ms. Hyde and Dr. Martin. The survey form and this signed consent form will be stored in separate files in a locked filing cabinet in Ms. Hyde's office. The digital recording of your interview will be permanently deleted when the transcript is completed and verified (by October 2021) by Ms. Hyde. The brief demographic form and consent form will be shredded as per the University of Manitoba's policy for destruction of confidential material in October 2026. All electronic files (transcripts, field notes, codebook, NVivo10) will be deleted in October 2026.

Risks and Discomforts

You are free to withdraw from the study at any time with no repercussions, by telling Ms. Hyde. You may also withdraw from the study at a later time by telephoning Ms. Hyde at (xxx) xxx-xxxx or emailing her at @myumanitoba.ca.

You are not required to provide a reason for withdrawing from the study. If you choose to withdraw from the study, after the interview has been completed, all data you have provided will be destroyed. If you choose to withdraw, you may still keep the Starbucks's gift card.

There are some risks to participating in this interview. Some people are uncomfortable discussing sexuality, sex, and sexual health and can experience mild emotional discomfort. Reflecting on education provided can cause mild to moderate emotional discomfort if the healthcare provider feels they could have been a more effective educator. In the event that you feel distressed at any time during the interview, please inform Ms. Hyde. Ms. Hyde and you will then determine if you would like to stop the audio-recording, take a break, continue the interview, or end the interview completely.

Benefits

There are no known personal benefits to participating in this interview. For some individuals, sharing and talking about your experiences might help you identify individual and contextual factors that shape sexual health education with ACS survivors.

Your participation in this interview will help us investigate health care professionals' experiences of providing sexual health education to ACS survivors. This information will be used to identify resources and strategies that may help other healthcare professionals successfully provide the same education.

Costs

There is no cost to you to attend the individual interview.

Payment for participation

Upon completion of the interview or when you decide to end the interview, a \$25 Starbucks' gift card will be provided to you.

Confidentiality

We will do everything possible to keep your personal information confidential. Your name or professional designation will not be used at all in the study records. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point.

The interview transcript and reflective journal (no names, no identifying features) will be uploaded onto a password protected file on the shared drive at the University of Manitoba, accessible only to Ms. Hyde and Dr. Martin. The survey form and this signed consent form will be stored in separate files in a locked filing cabinet in Ms. Hyde's office. The digital recording of your interview will be permanently deleted when the transcript is completed and verified (by October 2021) by Ms. Hyde. The brief demographic form and consent form will be shredded as per the University of Manitoba's policy for destruction of confidential material in October 2026.

Transcripts and the reflective journal will be read carefully to determine factors that shape the experiences of providing sexual health education to ACS survivors. Direct quotes may be used to demonstrate key points with no reference to your real name or position. All electronic files (transcripts, field notes, codebook, NVivo10) will be deleted in October 2026.

The recording of the interview will be shared with Transcription Heroes through a secure upload to their website. Your name or identifying information will not be shared with Transcription Heroes.

Voluntary Participation/Withdrawal from the Study

Your decision to take part in this study is voluntary. You may refuse to participate or you may withdraw from the study for up to three months after the interview.

Questions

If any questions come up during or after the study contact the principal investigator Emily Hyde at xxx-xxx-xxxx. For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at (204) 789-3389

Consent Signatures:

1. I have read all 3 pages of the consent form.
2. I have had a chance to ask questions and have received satisfactory answers to all of my questions.
3. I understand that by signing this consent form I have not waived any of my legal rights as a participant in this study.
4. I understand that my records, which may include identifying information, may be

reviewed by the research staff working with the Principal Investigator and the agencies and organizations listed in the Confidentiality section of this document.

5. I understand that I may withdraw from the study at any time and my data may be withdrawn prior to publication.
6. I understand I will be provided with a copy of the consent form for my records.
7. I agree to participate in the study.

Participant signature _____

Date _____
(day/month/year)

Participant printed name: _____

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent

Printed Name: _____ **Date** _____
(day/month/year)

Signature: _____

Role in the study: _____

Appendix C

Semi-structured Interview Guide

1. Tell me about a scenario when you provided sexual health education to a person with ACS.
2. What questions have ACS patients and/or their partners asked you about their sexual health?
3. How did those questions about their sexual health make you feel?
4. Please tell me how you assess patients' and/or their partners' understandings of sexual health.
5. What information did you provide to patients with ACS and their partners?
6. How did you provide this information? (written, verbal etc if asked for clarification)
7. Tell me how you became or will become confident and competent in the provision of sexual health education.
8. In an ideal world, what factors are available/needed to support sexual health education in cardiac rehabilitation programs?
9. Is there anything else that you would like to share?

Appendix D

Oath of Confidentiality



UNIVERSITY
OF MANITOBA

College of Nursing

Helen Glass Centre for Nursing

Winnipeg, Manitoba

Canada R3T 2N2

Telephone: (204) 474-7452

Fax: (204) 474-7682

Pledge of Confidentiality

I, _____, agree to maintain full confidentiality in regards to any and all research material received in the course of my involvement in the study entitled, "Health care professionals' perspectives of factors shaping sexual health education for adults with acute coronary syndrome in cardiac rehabilitation programs: An interpretive description"

Furthermore, I agree:

1. To hold in strictest confidence the identification of any individual(s) that may be revealed during the recording, videotaping, interviewing, and presenting of honorariums to study participants.
2. To store all letters, research and data and materials in a safe, secure location as long as they are in my possession.
3. To destroy as confidential waste, any hardcopy research data in my possession after it is no longer required as directed by the study principal investigator.

I am aware that I can be held legally responsible for any breach of this confidentiality agreement, and for any harm incurred by individuals if I disclose identifiable information contained in the research data to which I will have access.

Staff Member's signature

Staff Member's Name (printed)

Date: _____