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Canadian Council of Cardiovascular Nurses
Conseil canadien des infirmières(iers) en nursing cardiovasculaire

Editorial

In God we trust; all others must bring data
– W. Edward Deming (physicist and quality improvement pioneer)

Although I consider myself to be more spiritual than religious, this quote resonated with me on so many levels. First, if we were still in the midst of a COVID crisis, I would have immediately thought of the large contingent of anti-vaxers who trust in God, but not in data! But I digress! Or do I? We begin this issue with Emily Hyde's heartfelt op-ed of her lived experience as a cardiovascular nurse who was in the trenches during the dark hours of the COVID pandemic. Emily hopes "bringing her data" to the fore will resonate with all of you, in some way! As the editor of the CJCN, I hope that Emily's story will encourage you to share your story or "bring your data" to the CJCN readership. We are still seeking personal stories, and clinical practice-, education-, and research-related manuscripts for a theme issue entitled "*COVID-19's Impact on Cardiovascular Nursing: Lessons Learned.*"

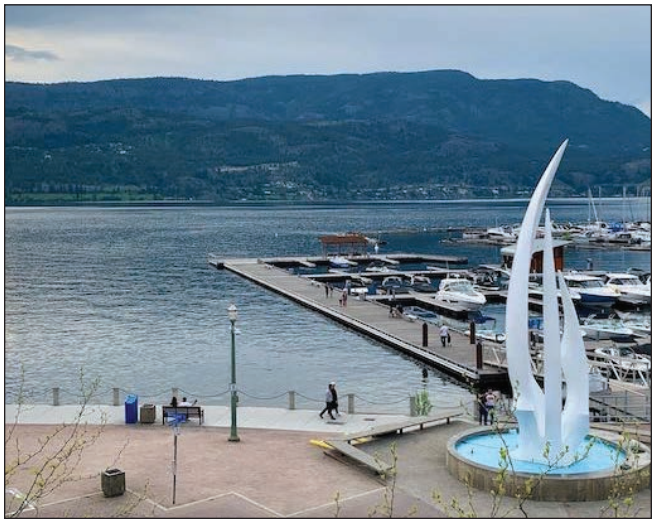
Second, the two research-based papers in this issue are exemplars of clinically based nurses taking steps to improve the quality of patient care by 'bringing data' (i.e., research evidence) to substantiate changes to improve patient outcomes. In their study, Amanda Armstrong and her colleagues identify enablers and barriers to sleep promotion practices in post-operative cardiac surgery patents. Karyne Duval and colleagues engage heart failure patients and nurses as a strategy to refine their proposed heart failure self-care intervention.

Last, but not least, our CJCN Editorial Board has teamed up to provide an enticing open call for new CJCN Editorial Board members. The team 'brings the data' by outlining the duties and responsibilities of Editorial Board Members, the criteria for appointment, and most importantly, their perspective of the learning opportunities and other benefits of this role. A special thank-you to Krystina Lewis, our French Editor and Associate Editor, for coordinating this effort, and to Julie Houle for the French translation in our effort to elicit interest in both English- and French-speaking applicants for this role!

Happy reading,
Jo-Ann V. Sawatzky, RN, PhD
Editor, CJCN

CCCN Annual Spring Conference 2022

CCCN 's first post-COVID Spring Conference was held in lovely Kelowna, BC on May 27–28, 2022.



Prior to the conference, the CCCN Board members and staff met in person for the first time in several years!!

During the conference, presentations were accessible for registered virtual and in-person participants. In addition to the invited speakers, 21 papers were presented over the two days of the conference. A brief overview of these presentations is included below. CCCN members can access the video recordings of these presentations on our website: **https://cccn.ca/spring-2022/events/program**

Conference Presentations

The Breakthrough of Digital Health and Telemedicine in Heart Failure during the era of the COVID-19 Pandemic

Presented by Noorin Jamal

In this presentation, Noorin provided an overview of heart failure management and models of care in Canada pre-pandemic, the benefits/risks of digital health and telemedicine in heart failure management, and opportunities for heart failure management and the role of nursing to support and advocate for the most optimal patient experience and patient outcomes.

"Timed Out" – Recognition of the Early Warning Symptoms in the Development of Cardiac Disease: An Artistic Exhibit through Thematic Photography

Presented by Shelia O'Keefe-McCarthy

In this presentation, Sheila discussed the findings of her recent secondary analysis in which she explored the process of realization of unusual and unprovoked early symptoms (Prodromal Symptoms) leading to coronary artery disease.

Peripheral arterial Disease & Venous Disease: Assessment and Treatment Strategies

Presented by Karen Then

In this presentation, Karen provided a comprehensive overview of the etiology, diagnosis, and medical and surgical management of peripheral arterial and venous diseases. She discussed classification, prevention, clinical presentation, precipitating factors, operative indications, treatment modalities, and follow-up. Current research and guidelines, exemplars from clinical practice, and nursing assessment, management and recognition were also highlighted.

Palliative Care for Canadians with Heart Failure

Presented by Laura Runcie

In this presentation, Laura explored the Who, What, Were, When and Why of palliative care and heart failure in Canada, including an overview of related Canadian Cardiovascular Society guidelines, a description of the heart failure and palliative care relationship, and a personal patient/family experience.

12-Lead ECG interpretation – The Basics

Presented by Brenda Ridley

In this presentation, Brenda provided foundational information on 12-lead ECG basics and skills that are relevant in all realms of clinical practice. She included a review of the coronary arteries and cardiac electrical conduction system, a systematic approach to analyzing a 12-lead ECG, how to recognize specific client presentations that require obtaining a 12-lead ECG, and how to identify localized areas of ischemia, injury and infarct on 12-lead ECGs.

COVID and The Impact on RNs – An Artistic Exhibit on the Emotional Aspects of Going into Long Term Care Homes During the First Wave of the Pandemic
Presented by Sheila O'Keefe-McCarthy

In this presentation, Sheila describes how arts-based dissemination made visible nurses' experiences providing COVID-19 preparedness, education, and support to long-term care facilities in Ontario, Canada. The use of layered qualitative arts-based analysis, thematic poetry, digital art, and paintings to represent the data revealed themes of "Controlling the viral load and fear," "Self-protection-sustaining practice," and "The power of collegial co-reciprocal trust."

A Rare Find: Takayasu Arteritis in a Young Female
Presented by Maryann Rabusic-Wiedener, Karen Wiens, & Leslie Poirier

In this presentation Maryann, Karen, and Leslie provided an overview of the six different types of takayasu arteritis with a focus on type 2A, which was the diagnosis of the young female in their case study. An overview of this interesting case included her initial presentation, diagnosing characteristics, medical and surgical implications, post-operative challenges, and long-term management.

The Curse of the Failing Fontan
Presented by Pam Demarbre & Collette Gibson

In this presentation, Pam and Colette highlighted the growing epidemic of adult congenital heart disease and the multi-system effects of the failing Fontan in this population. Case studies of adult congenital patients with multiple complications, such as failing Fontans, as well as evaluations on outcomes for interventions, and a review of future patient management and selection were also discussed.

Stellate Ganglion Blockade – You want to put a needle WHERE to stop this VT?
Presented by Emily Hyde

In this presentation, Emily described the clinical use of stellate ganglion blockade (SGB) for ventricular tachycardia/ventricular fibrillation. She also reviewed the medications used and procedure to perform SGB, as well as outcomes and safety considerations for SGB, and a decision-making algorithm for neuro-cardiology consult for SGB.

12-Lead ECG interpretation – Common Abnormalities
Presented by Jacqueline Lum, Elizabeth Mulvany, & Jane Narayan

In this presentation, Elizabeth and Jane built on the previous ECG session presented by Brenda Ridley. They described multiple common 'abnormal ECGs' and discussed common abnormal ECG findings, their significance to clinical practice, further investigations required, and when you should worry or refer on.

Writing for Publication in the Canadian Journal of Cardiovascular Nursing (CJCN): From Daunting to Delightful
Presented by Jo-Ann Sawatzky

In this presentation, Jo-Ann highlighted the importance of publishing our unique clinical experiences, case studies, innovative solutions in clinical practice, research findings, or other topics related to cardiovascular health and illness. As the Editor of the CJCN, Jo-Ann shared her tips and strategies for success in writing for publication.

Differentiating Aortic Dissections: Assessment & Treatment Options
Presented by Karen Then

In this presentation, Karen highlighted the significant increase in aortic dissections over the last decade. She reviewed Type A & B aortic dissections, including etiology, diagnosis, and surgical and medical management. She reviewed the classification and clinical presentation of acute aortic dissections, as well as precipitating factors, operative indications, treatment modalities, complications and post-operative/conservative management and follow-up. Current research and guidelines, as well as exemplars from clinical practice, and nursing assessment and management were also discussed.

The Canadian Journal of Cardiovascular Nursing announces a Call for Papers for a Special Theme Issue: *COVID-19's Impact on Cardiovascular Nursing: Lessons Learned*

As we are beginning to see the end of the COVID-19 pandemic, it is time to reflect and share our lessons learned during this pandemic! What positive changes have occurred in your workplace that will change healthcare for the better going forward? What challenges have you had to overcome? Broad topic areas related to this theme may include, but are not limited to:

- Virtual Care
- Cardiac Rehabilitation
- Patient & Nursing Education
- Impact on the Nursing Workforce
- New & Alternative Models of Care
- Long Haulers & Cardiovascular Health

The *Canadian Journal of Cardiovascular Nursing* (CJCN) is pleased to announce the call for papers for a special theme issue on COVID-19 in the Summer/Fall, 2022 issue. We invite any and all nurses, including researchers, clinicians, educators, leaders, and others to consider submitting original research, short reports, knowledge synthesis/review papers, commentaries, case reports, arts informed scholarship, and other discourse relevant to this theme.*

Please direct queries to Dr. Jo-Ann Sawatzky, CJCN Editor at joanne.sawatzky@umanitoba.ca.

NOTE: Deadline for submissions extended to: November 1, 2022

*Please follow CJCN Author Guidelines for all submissions: https://www.cccn.ca/media.php?mid=1278.

La revue canadienne de soins infirmiers cardiovasculaires annonce un appel à communications pour un numéro thématique spécial: *L'impact de COVID-19 sur les soins infirmiers cardiovasculaires: Leçons tirées*

Alors que nous commençons à voir la fin de la pandémie de COVID-19, il est temps de réfléchir et de partager les leçons que nous avons tirées de cette pandémie. Quels sont les changements positifs survenus sur votre lieu de travail qui vont améliorer les soins de santé à l'avenir? Quels sont les défis que vous avez dû surmonter? Les grands sujets liés à ce thème peuvent inclure (mais ne sont pas limités à):

- Soins virtuels
- Réadaptation cardiaque
- Éducation des patients et des infirmières
- Impact sur le personnel infirmier
- Modèles de soins nouveaux et alternatifs
- COVID-19 à long terme et santé cardiovasculaire

La revue canadienne de soins infirmiers cardiovasculaires (RCSIC) a le plaisir d'annoncer un appel à communications pour un numéro thématique spécial sur la COVID-19 dans le numéro d'été/automne 2022. Nous invitons toutes les infirmières et tous les infirmiers, y compris les chercheurs, cliniciens, éducateurs, les leaders et autres, à soumettre des recherches originales, des rapports succincts, des synthèses de connaissances, des commentaires, des rapports de cas, des études fondées sur l'art et tout autre discours pertinent à ce thème.*

Veuillez adresser vos questions à Dre Jo-Ann Sawatzky, rédactrice en chef, à l'adresse joanne.sawatzky@umanitoba.ca.

REMARQUE : Date limite de soumission reportée au : 1er novembre 2022

*Veuillez suivre les directives de la RCSIC concernant les auteurs pour toutes les soumissions : https://www.cccn.ca/media.php?mid=1278.

OPPORTUNITY
Associate Editors & Guest Peer Reviewers for the *Canadian Journal of Cardiovascular Nursing*

We are currently seeking **Associate Editors** and **Guest Peer Reviewers** for the *Canadian Journal of Cardiovascular Nursing* (CJCN). Required qualifications include:

- At least 5 years of cardiovascular nursing experience
- A current CCCN membership
- A minimum of master's preparation
- Experience in publishing in peer-reviewed journals

We encourage qualified nurses to consider these rewarding roles. Experience reviewing manuscripts is preferred for the Associate Editor role. The Guest Peer Reviewer role is an ideal way to gain experience reviewing manuscripts, with guidance and support from the Editor. Guest peer reviewers should possess subject-matter expertise in the topic of the paper to be reviewed.

This is an opportunity to learn and grow, and to share your knowledge and expertise in the area of cardiovascular nursing scholarship and publishing! For further information on these opportunities to participate in the CJCN publication process, please contact CCCN Director of Publications & CJCN Editor, Dr. Jo-Ann Sawatzky at joanne.sawatzky@umanitoba.ca

OPPORTUNITÉ
Rédacteurs adjoints et évaluateurs invités pour la *Revue canadienne de soins infirmiers cardiovasculaires*

Nous sommes actuellement à la recherche de rédacteurs adjoints et d'évaluateurs invités pour la revue canadienne de soins infirmiers cardiovasculaires. Les qualifications requises pour ces postes sont les suivantes:

- Au moins 5 ans d'expérience en soins infirmiers cardiovasculaires
- Être membre en règle du Conseil canadien des infirmières et infirmiers en soins cardiovasculaires
- Préparation à la maîtrise, au minimum
- Avoir publié dans des revues évaluées par les pairs

Nous encourageons les infirmières et infirmiers qualifiés à envisager ces rôles enrichissants. De l'expérience avec la révision de manuscrits est préférable pour le poste de rédacteur adjoint. Le rôle d'évaluateur invité est un moyen idéal d'acquérir de l'expérience dans la révision de manuscrits, avec les conseils et le soutien de la rédactrice en chef. Les évaluateurs invités doivent posséder une expertise dans le domaine du manuscrit à évaluer.

C'est une occasion d'apprendre et de développer ses compétences professionnelles, et de partager vos connaissances et votre expertise dans le domaine de la recherche et de l'écriture en soins infirmiers cardiovasculaires. Pour obtenir de plus amples renseignements sur ces postes, veuillez communiquer avec la directrice des communications et rédactrice en chef de la RCSIC, Dre Jo-Ann Sawatzky, à l'adresse joanne.sawatzky@umanitoba.ca.

Coming Back From the Brink: One Cardiovascular Nurse's Story of Resilience During the COVID Pandemic

Emily Hyde, RN, MN, PhD Student, CCN(C), Clinical Nurse Specialist, Cardiac Sciences Manitoba
Email: ehyde@sbgh.mb.ca

I never thought it would happen to me!

After comforting and supporting a distraught family for most of my 12-hour shift, it was finally time to extubate my 50-something-year-old, brain-dead patient. Still in shock and disbelief, his family had done the impossible and said their goodbyes. Anticipating another long, drawn-out death, I braced myself for providing many more hours of comfort care to my patient and his family. Instead, the patient became apneic immediately after extubation and died within minutes. I should have felt relieved – he was at peace – but it was yet another death, another face I would never forget, another family whose pain I could do nothing to relieve.

Something broke inside me in that room that day. I found myself sobbing in the medication room. *What's wrong with me?* I had dealt with dying patients before; I am the nurse my colleagues rely on to care for the most complex patients, and to provide the most empathetic care to patients and their families during the most stress-filled situations. I am known as being strong and resilient. *I can't be having a hard time with this death; that would mean I am weak and that is not me*. I had seen this happening to co-workers, but this could not be happening to me! How could I be the nurse on the brink of breakdown?

I feel I have been quite successful in my relatively short nursing career. I graduated with my degree in nursing in 2011; by 2012, I was working in a busy, tertiary care ICU. In 2015, I left the ICU to become a Continuing Education Instructor. I completed my MN in 2020, and then, not long after, I got my dream job as a Clinical Nurse Specialist, in the spring of 2021. I then set my sights on a doctoral degree and returned to full-time studies while working almost full-time. I know I am at my best when I am busy; multi-tasking and pivoting from one area of focus to another comes naturally to me.

So, what led me to the brink?

After only 15 days in my new dream job, I was redeployed to the medical ICU because of the COVID pandemic's impact on hospitalizations and on ICUs, in particular. I had not worked shiftwork in six years. I was deployed to care for an unfamiliar ICU population. It didn't take long before I was physically exhausted from the lack of sleep, the long work hours, the heavy patient care, the mandatory overtime, the staffing shortages, and the list goes on. I was emotionally exhausted from the death; so much death! Losing seven patients in four shifts will do this to just about everyone. When I was released from my deployment after 13 long weeks, I was beyond relieved! I dove back into my CNS-related projects and tried to forget the horrors of those 13 weeks. Just talking about possibly having to return to the ICU again gave me palpitations and took my breath away with anxiety. While a friend noted this uncharacteristic response, I joked about it. She suggested counselling and I laughed about that too, and said sure, I should do that. I brushed it off, because in my mind, I had an image to uphold of being strong and resilient and not needing help from anyone. When the same friend suggested counselling a second time, I did go for a couple of sessions, but I didn't click with the counsellor, so I stopped going. I had gained insight into several new perspectives and so, I thought I was fixed. I was, after all, resilient.

I was shocked and angry when I was redeployed the second time, just four months later. It happened two weeks before Christmas with no warning. I felt it was unfair that my life was being turned upside down *again*. I struggled with the loss of control of my life; being forced to support a broken system and the people who had rejected the science behind the COVID vaccines. Fortunately, I was able to negotiate a better work schedule, as well as being assigned to a more familiar ICU patient population. I had things to be grateful for, as others had it so much worse. It was time for the resilient Emily to be strong, to shine.

At first, it was not difficult for me to shine. I was back with friends, caring for a familiar population of patients. I maintained a sense of normal in my personal life with family time, running, and my doctoral studies. But the dullness started to set in after about six weeks. When I stopped being able to sleep through the night, I shrugged it off as hormonal. When my appetite began to wane, I didn't even notice, since we were often so busy and short staffed that I didn't get breaks at work. When my energy lagged, I blamed it on the lack of sleep and food, and work. I was working 12-16 hours shifts; I had done an 8-hour day shift then went back for an 8-hour night shift. Who wouldn't be tired? I couldn't focus on my readings or writing assignments for my doctoral classes. I ignored all these signs because of my personal strength, my

ability to do anything, and I had never been challenged like this before! Looking back, I realize that the cracks were forming in my foundation of resilience.

And then, my breaking point: my 50-something-year-old, brain-dead patient died very suddenly. I told myself I had over-reacted. My coworkers told me I had done nothing wrong. His family was so thankful that his passing was peaceful. After my shift, I stopped at my favourite bakery for a slice of my favourite cake as a 'pick me up.' They had just sold the last piece; I burst into tears! Mortified, I ran out of the shop. But, I just shrugged this off as the consequence of a difficult day at work; I went home and went to bed. My husband was concerned and wanted to hear about my day, but I didn't want to talk about it. This was my issue; I didn't want to burden him; I had never needed to talk to anyone about the things I have seen and experienced in my workplace; resilient Emily could deal with it on her own.

The next day I couldn't get out of bed. I started crying and couldn't stop. I got up to try to eat and went back to crying some more before my toast was even ready. My husband convinced me to call in sick for my night shift. I felt like a failure; I was letting the unit down. I cried some more. I started having palpitations. I was short of breath. I didn't know what to do, but I knew that I would rather be dead than go back to work in the ICU. If I drove off a bridge on my way to work, I wouldn't have to go to in. These thoughts scared me. I realized this was not normal. I couldn't do it all. I was breaking and I needed help.

Finding My Way Back from the Brink

I reached out to my family physician. I was diagnosed with depression, anxiety, and adjustment disorder. She told me I could not go back to work for at least four weeks and that I had to start counselling. She also prescribed an anti-depressant. While I was relieved that I didn't have to go back to work and that I was getting help, a part of me was still feeling that I should be able to do this on my own!

The road back was not easy. For the first few weeks, the medication gave me brain fog; I slept, and slept some more! I couldn't concentrate on my studies and hardly got out of bed. I avoided the many friends and colleagues who reached out to help, as I just wasn't ready to expose the cracks in my resilience. But, I did everything my counsellor advised me to do. I made lists of things I liked to do and things I had to do. Initially, it felt good to check off washing my face that day. After about two weeks of medication and counselling, I woke up one day feeling more like myself again. My brain fog lifted, and I was able to go for my usual run for the first time without taking any breaks. I felt like I had turned a corner! My counsellor told me how proud she was of me. My doctor was happy with my progress. After three-and-a-half weeks, I was medically cleared to return to work in my normal CNS role.

It felt like the first day of school. I was excited to return, but scared at the same time. What would I say about my redeployment? Would I tell people about the reason for my sick leave? As a recognized leader, would I be looked down upon if I admitted I had been broken? Would I be seen as someone who was weak or a failure? I looked up the definition of resilience in the *Merriam-Webster Dictionary* (https://www.merriam-webster.com/dictionary/resilience) and noted that it means the "ability to recover from or adjust easily to misfortune or change." It doesn't mean I cannot do anything that is put before me. It means it is okay to not be okay. I decided, then and there, that I didn't need to be ashamed of being off work for a mental health issue. When a co-worker asked how it felt to be back, I told her what had happened. Her response was it was no different than having a broken arm or back injury; I was being a leader by addressing the problem and normalizing my mental health struggle. Another friend shared her strategy for the timing of my medication to help me sleep and shared parts of her mental health journey. These and many other supportive co-workers and friends made me feel accepted and normal. I realized that I am not the only one who has struggled during this COVID pandemic – and recovered! And so, I have continued to share my journey, and to lead by example.

Upon reflection, what would, or could I have done differently? For one, I would remind myself to pause and listen to my body. The signs were there – the lack of appetite, the lagging energy, the inability to concentrate. I would also be more open with my support system, my friends, family, and co-workers, about what I was going through and not be ashamed of the cracks in my foundation of strength and resilience. I should have sought professional help earlier; I am so glad I got the help I needed. It is not weak to need help and especially, as a nursing leader, it is important to walk the talk. Finally, I would remind myself that resilience means you can be at the brink and you can adjust, recover, and bounce back.

Exploring Nurses' Sleep Promotion Practices in the Care of Post-Operative Cardiac Surgery Patients

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Abstract

Background: *Post-cardiac surgery inpatients commonly experience poor sleep. Little is known about nurses' sleep promotion practices (SPPs) within this context.*

Objectives: *To explore nurses' use of non-pharmacological SPPs in post-cardiac surgical settings.*

Methods: *Our cross-sectional study was guided by the Theoretical Domains Framework. We surveyed cardiac surgery intensive care and ward nurses (N = 91) at one Canadian cardiac centre (N = 91). Descriptive statistics and comparative analyses (Chi Square, Mann Whitney U, & Fisher's Exact Test) are reported.*

Results: *Frequently used SPPs included orienting inpatients to their rooms (n = 89, 98.9%) and dimming/turning off bright lights (n = 87, 98.9%). Nurses ranked decreasing noise (n = 37, 56.9%) as the most beneficial. Common enablers to SPPs were awareness of the benefits (n = 72, 100%) and the importance of sleep promotion (n = 77, 98%). Common barriers were competing priorities (n = 60, 83%) and non-recognition from healthcare professionals (n = 61, 86%).*

Conclusions: *Identified enablers and barriers offer targets to optimize nurses' SPPs for cardiac surgery inpatients.*

Keywords: sleep, sleep promotion, cardiac surgery

Armstrong, A. C., Squires, J. E., Backman, C., Charlebois, A., Cooper, C., & Lewis, K. B. (2022). Exploring Nurses' Sleep Promotion Practices in the Care of Post-Operative Cardiac Surgery Patients. *Canadian Journal of Cardiovascular Nursing*, *32*(1), 10–18.

Adequate sleep is crucial to overall health and wellbeing (Buysse, 2014) and important in recovery from illness and surgery (Boitor et al., 2019; Casida et al., 2013; Casida et al., 2018; Liao et al., 2011; Spence et al., 2011). More than 70% of hospitalized patients report poor sleep (Caruana et al., 2018). Reasons for inadequate sleep include anxiety, environmental stimuli, noise, hospital lighting, timing of medication administration, and nursing interventions (Tamrat et al., 2014). While these same reasons also apply to post-operative cardiac surgery patients (Redeker & Hedges, 2002), this population is faced with additional sleep barriers, such as the lingering effects of cardiopulmonary bypass and anesthesia, cardiac medications, pain, and the need to deal with a sternotomy, drainage tubes, oxygen therapy, and decreased mobility (Casida et al., 2013; Casida et al., 2018; Liao et al., 2011). Sleep inadequacies in post-operative cardiac surgery patients have also been associated with adverse postoperative events, increased anxiety, delirium, depression, and negative impacts to wellbeing (Caruana et al., 2018; Choudhury et al., 2017; Zhang et al., 2015). For example, in a prospective cohort study of post-operative coronary artery bypass graft (CABG) surgery patients (N = 76), Zhang et al. (2015) reported that poor quality of sleep was an independent predictor of delirium, as 63.2% of the participants who exhibited poor sleep quality developed delirium.

Healthcare providers report concerns that sleep is not prioritized in the hospital setting (Ye et al., 2013). Given their round-the-clock presence, nurses are well-positioned to promote inpatients' sleep (Radtke et al., 2014). However, nurses encounter numerous patient, healthcare provider, and environment-related factors that hinder their ability to promote sleep (Gellerstedt et al., 2015). Gellerstedt and colleagues (2015) explored nurses' perspectives (N = 22) on inpatients' sleep across a variety of acute care units. In this study, nurses reportedly lacked education and knowledge of sleep and sleep promotion practices (SPPs); they also

faced challenges assessing inpatients' sleep quality and used non-evidence-based sleep promotion pratices (Gellerstedt et al., 2015). Other barriers to SPPs in acute care settings included nurses' negative attitudes and beliefs regarding the importance of inpatients' sleep (Machado et al., 2017), lack of resources to guide sleep assessments, and lack of managerial support (Gellerstedt et al., 2015). Specific to cardiac surgery patients, based on a systematic review of 10 randomized controlled trials that explored the effectiveness of non-pharmacological sleep interventions in post-operative cardiac surgery patients, Machado et al. (2017) postulated that nurses' personal knowledge and values about the importance of sleep impacted the use of SPPs. While the findings of an intervention study (N = 177 patients), which focused on increasing nurses' knowledge about improving patient's sleep following cardiac surgery, were not statistically signficiant, Greve and Pedersen's (2016) noted some positive effects on patients' sleep quality. Thus, although factors influencing the use of SPPs have been investigated in a variety of acute care settings, there is still a dearth of evidence related to cardiac surgey patients, particularly in the Canadian context.

Sleep Promotion Practices

In this study, we defined SPPs as non-pharmacological actions taken by nurses to assist their cardiac surgery inpatients achieve optimal sleep. We focused on non-pharmacological SPPs because: 1) there is evidence to support their effectiveness (Machado et al., 2017); 2) they are considered a safer alternative to sleep-inducing pharmacological agents (Hu et al. 2015); and 3) their delivery is within the scope of nursing practice. We identified five categories of non-pharmacological SPPs in the literature: 1) relaxation techniques, such as orienting inpatients to their rooms, maintaining a comfortable environment, and dimming the lights (Casida et al., 2013; Hadjibalassi et al., 2018; Spence et al., 2011; Zhang et al., 2015); 2) devices or equipment to minimize sleep interruptions, such as providing eye masks, headphones, and music (Machado et al., 2017; Spence et al., 2011); 3) educational strategies, such as pre-operative patient education and non-pharmacological management of post-operative complications (e.g., encouraging daytime mobilization; Guo et al., 2012; Machado et al., 2017; Yayla & Özer, 2019); 4) noise reduction, such as decreasing the volume of conversations and alarms (e.g., telemetry & intravenous alarms; Spence et al., 2011); and 5) prophylactic sleep promotion, such as clustering care and other strategies to minimize unnecessary interruptions while the patient sleeps (Le et al., 2012; Matukaitis et al., 2014; Zhang et al., 2015). Nurses can also assess if it is feasible and safe to postpone certain nursing activities while the patient is asleep, such as blood draws, bathing, linen changes, and daily weights, which can lead to a more recovery-centred and patient-focused care delivery (Matukaitis et al., 2014).

Aim & Methods

The overall aim of this study was to explore the non-pharmacological SPPs used by nurses with patients in the cardiac surgical intensive care unit (CSICU) and cardiac surgical wards, and to identify the factors that influence the use of these practices. Our specific objectives were to: 1) determine the type and extent of SPPs used by nurses in the post-operative cardiac surgical population; 2) determine if there is a difference in type and extent of nurses' SPPs by setting (i.e. CSICU versus cardiac surgery ward); and 3) identify the barriers and enablers to nurses' use of SPPs in the post-operative cardiac surgery inpatient population overall, and by setting (ie., CSICU vs. cardiac surgery ward).

Since the focus of this study was on identifying factors related to promoting sleep promotion, as behaviour to engage in, we used the Theoretical Domains Framework (TDF) (Michie et al., 2005) to guide our data collection and analysis. The TDF is a comprehensive behaviour change framework that is used by researchers to identify factors that may influence behaviours (Cane et al., 2012). The TDF consists of 14 domains and 84 constructs (Cane et al., 2012). The 14 domains are: (1) knowledge, (2) skills, (3) social/professional role and identity, (4) beliefs about capabilities, (5) optimism, (6) beliefs about consequences, (7) reinforcement, (8) intentions, (9) goals, (10) memory, attention and decisions processes, (11) environmental context and resources, (12) social influences, (13) emotion, and (14) behavioural regulation (Cane et al., 2012). We selected this framework to ensure that a pre-established and evidence-based theory, and not the research team or healthcare providers' ideas or intuition, guided our data collection and analysis processes.

Study Design

We conducted a cross-sectional survey study. We obtained ethical approval from the Ottawa Health Science Network Research Ethics Board (OHSN-REB; 20200009-01H) and the University of Ottawa Office of Research Ethics and Integrity (H-01-20-5434).

Sample & Setting

Study eligibility criteria included all registered nurses who provided direct care for cardiac surgery patients in either the CSICU or the two cardiac surgery wards at a Canadian cardiac centre (N = 204). At the time of data collection, the CSICU had 22 beds and the two cardiac surgery wards had a total of 64 beds. Nurse-to-patient ratios were generally one to two patients per nurse (day and night shifts) in the CSICU and three to four patients per nurse (day shift) and five to six patients per nurse (night shift) on the ward.

The most common cardiac surgery procedures performed at our center are CABG, valve replacement/repairs, and heart transplant surgeries. The typical trajectory of care for post-operative cardiac surgery patients is as follows: patients are in the CSICU for approximately 24 hours immediately post-surgery. Stable patients are transferred to the ward on

post-operative day one and are discharged within four or five days. There are currently no sleep promotion protocols guiding clinical practice at our site.

Instrumentation: Questionnaire Development Process

Guided by the existing literature on SPPs and the TDF (Cane et al., 2012; Michie et al., 2005), we developed a questionnaire that specifically addressed our study objectives. Accordingly, we considered potential differences between patients' sleeping patterns in each setting (i.e., CSICU versus ward). To ensure the questionnaire reflected the practice realities of the nurses in each setting, both the CSICU and the ward nurse educators reviewed and provided feedback on the questionnaire. To ensure face and content validity, we consulted a psychologist with expertise in cardiac patients' sleep. The questionnaire was also pre-tested with 12 nurses (who were not a part of the study sample), using the *think aloud* method (Collins, 2003), in which respondents shared their thoughts while filling out the questionnaire. Once a minimum of three respondents pre-tested the questionnaire, the research team reviewed the feedback and made adjustments to the items as required, over three iterative cycles. The three-part questionnaire included the following sections: (1) demographic characteristics, (2) SPPs, and (3) barriers and enablers to nurses' SPPs. The last page of the questionnaire included an open-text field for participants to provide additional comments about sleep promotion. The questionnaire is available from the corresponding author (KBL) upon request.

Demographic characteristics collected included: gender, age, years of nursing experience, unit of employment, years of nursing experience on the current unit, level of education, employment status, and shift most commonly worked.

Based on our review of the literature, we included a list of SPPs, within five categories. For each SPP, we asked participants if they had used the SPP, as well as the perceived benefit. Most of the questions included a 5-point Likert frequency response scale (i.e., 1 = never; 5 = very often), with the exception of one ranking question (i.e., 1 = least beneficial; 5 = most beneficial), and one "select all that apply" question.

We relied on a published guide for using the TDF in research (Atkins et al., 2017), as well as existing TDF survey templates (Gnich et al., 2015; Huijg, Gebhardt, Crone et al., 2014; Huijg, Gebhardt, Dusseldorp et al., 2014; Skoien et al., 2016; Taylor, Parveen et al., 2013) to identify the barriers and enablers to nurses' use of SPPs in the cardiac post-surgery population, We utilized a previously developed questionnaire development approach (Huijg, Gebbhardt, Dusseldorp et al., 2014), which reportedly had high consistency reliability and content validity. We also adapted the wording of each statement to ensure relevance to the post-operative cardiac surgery sleep promotion context. In total, our questionnaire included 66 items across all 14 TDF domains. All items were rated on a 6-point Likert scale (i.e., 1 = very strongly agree; 6 = very strongly disagree).

Procedures

We recruited potential participants through a census sampling approach. Recruitment strategies included posters on the units, study packages handed out to nurses during various shifts, and emails sent to potential participants through the unit nurse educators. All data were collected via a three-part, online questionnaire, which was hosted on RedCap 8.5.6. (Redcap, 2020) and was accessible for a six-week period. Submitting the questionnaire implied consent.

Data Analysis

We used SPSS IBM Statistics version 26 for Mac, with statistical significance set at an alpha of .05. Demographic profiles were created for each setting (i.e., CSICU & ward), using descriptive statistics. Categorical variables were presented as frequencies and precentages; continuous variables were presented as means and standard deviations. To compare differences between the CSICU and ward, we used Chi-Square tests for normally distributed items and a Fisher's Exact Test for variables that did not meet statistical assumptions. Since many variables were skewed, we used a Mann Whitney U test for each item to determine significance ($p < 0.05$). To address objectives 1 and 2, we calculated frequencies and proportions to explore nurses' sources of SPPs knowledge, their rankings of the perceived benefit of SPPs, and the extent of their use of SPPs. We calculated medians by practice setting, to examine the extent of SPPs use, and used a Mann-Whitney U test to determine if any median differences between settings were statistically significant. To address objective 3, we analyzed the data related to barriers and enablers. All negatively worded items were reverse coded. We calculated the mean, standard deviation, and minimum and maximum values. All items with means of 3.5 or higher were labelled as *enablers* and all items with means of less than 3.5 were labelled as *barriers*. We verified this scoring by identifying the proportions of nurses who agreed or disagreed with each item to ensure that the data was accurately labelled. We used content analysis (Krippendorff, 2004) to synthesize, organize, and categorize open-ended responses. This synthesis was conducted by the first author (ACA) and verified by two team members (JES, KBL).

We determined that a sample size of 80 was required to conduct the statistical analysis (i.e., *t*-test) for the second and third objectives (Polit, 2010). However, because most of our data were not normally distributed, we were unable to conduct the intended parametric statistical analyses. Therefore, we used non-parametric analyses, including Chi Square and Mann Whitney U tests for these comparisons.

Results

While 106 participants opened the online questionnaire (52% response rate), 15 were excluded because they did not meet the eligibility criteria ($n = 4$), did not complete the questionnaire beyond the eligibility criteria ($n = 7$),

completed only the demographics section ($n = 3$), or did not state where they worked ($n = 1$). Therefore, a total of 91 participants were included in the analysis.

Demographic Characteristics

Demographic characteristics for the full sample (N = 91), and by setting (CSICU, $n = 41$; ward, $n = 50$) are presented in Table 1. The majority of participants were female ($n = 76$, 83.5%), 20–39 years of age ($n = 70$, 76.9%) and held a bachelor's degree ($n = 81$, 87.9%). The average length of nursing experience was 9.8 years. Statistically significant differences between CSICU and ward nurses included age, years of nursing experience, most common shift worked, and employment status. CSICU nurses were significantly older, had more years of nursing experience, and more commonly worked both night and day shifts compared to ward nurses.

Table 1

Sample Demographic Characteristics

Characteristic	Ward (*n* = 50)	CSICU (*n* = 41)	Total (N = 91)	*P* value
Years of RN experience Mean (SD)[a]	7.64 (8.6)*	12.51 (9.4)	9.83 (9.3)	0.001
Years working on current unit Mean (SD)[a]	5.55 (6.8)	8.05 (8.4)	6.69 (7.7)	0.198
Gender *n* (%)[b]				0.777
Male	6 (12.0)	7 (17.1)	13 (14.3)	
Female	43 (86.0)	33 (80.5)	76 (83.5)	
Prefer not to respond	1 (2.0)	1 (2.4)	2 (2.2)	
Age *n* (%)[b,c]				
Age 20–29*	28 (56.0)	8 (19.5)	36 (39.6)	<0.001
Age 30–39*	12 (24.0)	22 (53.7)	34 (37.4)	0.004
Age 40–49	5 (10.0)	6 (14.6)	11 (12.1)	0.483
Age 50–59	5 (10.0)	4 (9.8)	9 (9.9)	1
Age ≥ 60	0 (0.0)	1 (2.4)	1 (1.1)	0.271
Highest level of education *n* (%)[b]				0.863
College diploma	6 (12.0)	4 (9.8)	10 (11.0)	
Bachelor's degree	43 (86.0)	37 (90.2)	81 (87.9)	
Masters degree or higher	1 (2.0)	0	1 (1.1)	
Most common shift *n* (%)[b,c]				
Day shift*	20 (40.0)	2 (4.9)	22 (24.2)	<0.001
Night shift	7 (14.0)	3 (7.3)	10 (11.0)	0.317
Both*	23 (46.0)	36 (87.8)	59 (64.8)	<0.001
Employment status *n* (%)[b,c]				
Casual	2 (4.0)	2 (4.9)	4 (4.4)	0.841
Part time*	19 (38.0)	3 (7.3)	22 (24.2)	<0.001
Full time*	29 (58.0)	36 (87.8)	65 (71.4)	0.002

[a]Continuous variable associations were tested with Mann-Whitney U
[b]Categorical variable associations were tested with Chi Square or Fishers Exact Test
[c]Post hoc analysis conducted
*$p < 0.05$

Objective 1: Type and Extent of Sleep Promotion Practices

Overall, nurses reported acquiring their knowledge of SPPs through personal experience (n = 75, 82.9%), followed by advice from mentors (n = 44, 48.4%), and formal nursing education (n = 44, 48.4%). The most frequently used SPPs were 1) orienting inpatients to their rooms (n = 89, 98.9%); 2) dimming or turning off bright lights (n = 87, 98.9%); 3) assisting inpatients in achieving a comfortable position (n = 91, 97.8%); and 4) providing additional bedding (n = 87; 96.7%). The least used SPPs were 1) guided imagery (n = 2, 2.2%); 2) eye masks (n = 2, 2.2%); and 3) headphones (n = 4, 4.4%; see Table 2). With respect to ranking of the five categories of SPPs from most to least beneficial, nurses ranked decreasing noise (n = 37, 56.9%) as the most beneficial, followed by prophylactic promotion (n = 25, 30.5%), relaxation techniques (n = 2, 3.0%), devices and equipment to minimize sleep disruptions (n = 2, 2.5%), and lastly, educational strategies (n = 1, 1.5%; see Table 2).

Table 2

Nurses' Use of Sleep Promotion Practices (n = 89–91)

Category	Sleep Promotion Practice N (%)	Frequency of Use[a] Median	Ward Median	CSICU Median	Total
Relaxation techniques	Massage/backrub	13 (14.0)	3	3	3
	Guided imagery	2 (2.2)	1	1	1
	Encouraging deep breathing	67 (72.8)	4	4	4
	Assisting in achieving a comfortable position	91 (97.8)	5	5	5
	Assisting with bedtime routine	78 (83.9)	4	4	4
	Orienting to the room	89 (98.9)	5	5	5
	Providing additional bedding for patient comfort	87 (96.7)	5	5	5
Devices and equipment to minimize sleep eisruptions	Headphones* (p = 0.001)	4 (4.4)	2	1	2
	Eye masks	2 (2.2)	2	2	2
	Ear plugs* (p = 0.003)	7 (7.6)	3	2	2
	Music	2 (2.2)	2	2	2
	Room temperature adjustment	77 (83.7)	4	4	4
Educational strategies	Pre-operative teaching regarding sleep after surgery* (p = 0.001)	20 (22.0)	3	1	2
	Teaching proper sleep routine or self-care	33 (36.3)	3	3	3
	Encouraging daytime activity	81 (90.0)	4	5	4
Decreasing noise	Talking in quiet voices	72 (80.0)	4	4	4
	Avoiding conversations near patient areas	69 (76.7)	4	4	4
	Decreasing the volume of IV alarms	25 (27.8)	3	3	3
	Ensuring proper placement of heart monitor leads to minimize unnecessary/false alarms	58 (64.4)	4	4	4
Prophylactic promotion	Offering toileting prior to sleeping	70 (78.7)	4	4	4
	Clustering care	84 (95.5)	5	5	5
	Dimming or turning off bright lights	87 (98.9)	5	5	5
	Avoiding non-essential care during sleeping hours	60 (66.7)	4	4	4
	Encouraging avoidance of caffeine consumption	17 (18.9)	3	3	3

Legend: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Very Often

[a] Sum of nurses who rated frequency of sleep promotion practice use as *often* or *very often*

*Statistically significant $p < 0.05$

Objective 2: Differences in Type and Extent of Sleep Promotion Practices by Setting

There were no statistically significant differences between CSICU and ward nurses with respect to 1) where they obtained their knowledge on SPPs, or 2) how beneficial they perceived SPPs to be. The three SPPs that ward nurses used significantly more frequently than CSICU nurses were: 1) providing headphones ($p = 0.001$), 2) providing ear plugs ($p = 0.003$) and 3) providing pre-operative teaching regarding sleep after surgery ($p = 0.001$; see Table 2).

Objective 3: Barriers and Enablers to Nurses' Use of Sleep Promotion Practices

We identified 15 barriers and 45 enablers in the two settings. The three most common barriers identified across all nurses in both settings were: 1) the absence of recognition from important healthcare professionals after promoting sleep (TDF domain: reinforcement; $n = 61$, 85.9%); 2) often having something else more important to do than promoting sleep (TDF domain: goals; $n = 60$, 83.3%); and 3) encountering problems when trying to promote sleep (TDF domains: beliefs about capabilities; $n = 59$, 80.8%). The three most common enablers identified across all nurses in both settings were: 1) the belief that promoting sleep will benefit inpatients' health (TDF domain: beliefs about consequences; $n = 72$, 100.0%); 2) understanding why it is important for inpatients to get as many hours of sleep as possible (TDF domains: knowledge; $n = 77$, 98.7%); and 3) understanding why it is important for inpatients to have minimal or no interruptions during their sleep (TDF domain: knowledge; $n = 77$, 98.7%). Six factors were considered barriers in one setting, but enablers in the other (see Table 3).

Qualitative Findings

Twenty-seven nurses provided additional comments regarding their use of SPPs, and from these comments we identified six common themes. The most frequent theme was *unit norms, routines and care protocols* ($n = 15$), in which nurses felt constrained in their ability to promote sleep because of the unit practices and policies, such as morning weights and frequent nightly blood work. The second theme was *hospital-related factors that restrict nurses from adequately promoting sleep* ($n = 14$); for example, Participant #2 stated: "methods that might help is to have better curtains around beds (the ones we have are often not sufficient to block hallway light), and decreasing the volume of overhead announcements." The third theme was *lack of availability of sleep devices or equipment to minimize sleep disruptions* (e.g., eye masks, earplugs; $n = 11$). While the fourth theme was *a need for more education/training* ($n = 9$), the fifth was *previous problems with SPPs* ($n = 7$), and the sixth was *clustering care is part of the nurses' individual decisions* ($n = 3$).

Discussion

In this study, we explored the type, extent, and factors influencing use of SPPs among nurses caring for post-operative cardiac surgery inpatients. As well, we explored SPP differences between the CSICU and ward settings.

Sleep Promotion Practices

The most common SPPs used by nurses in our study were orienting the inpatient to the room, dimming or turning off bright lights, assisting the inpatient in achieving a comfortable position prior to sleeping, and providing additional bedding. In a study of hospital-based healthcare professionals (N = 62), Ye et al. (2013) found that most commonly used SPPs included moderated visiting hours, decreased noise, dimmed lights, and used relaxation techniques. In a fairly recent implementation guide to promote sleep, Soong et al. (2019) suggested implementing overnight periods of decreased noise, lighting, and interruptions for unnecessary clinical monitoring. We concur that these simple sleep promotion strategies should be implemented in the cardiac post-surgery setting to promote sleep in our patients.

The least common SPP used by nurses in our study were relaxation strategies (e.g., guided imagery), and providing patients with devices or equipment (e.g., headphones, eye

Table 3

Differing Barriers & Enablers Between the CSICU and the Ward

Domain	Item	Ward	CSICU
Environmental context and resources	In general, I have enough time to promote sleep on my shift	Barrier	Enabler
Beliefs about capabilities	I find it easy to promote sleep for my inpatients	Enabler	Barrier
Skills	I have been trained in general, on how to promote sleep for inpatients	Barrier	Enabler
Environmental context and resources	In the unit I work on, promoting sleep is routine	Enabler	Barrier
Emotions	My level of emotional exhaustion affects my ability to promote sleep	Barrier	Enabler
Social influences	Other colleagues (e.g., Advanced Practice Nurses, the Educator, physicians) encourage me promote sleep	Barrier	Enabler

masks) to minimize sleep disruptions. A cross-sectional Swedish study focusing on nurses' experiences and management of inpatients' sleep in a variety of acute care hospitals (N = 36) reported similar findings (Gellerstedt et al., 2019). However, others have found that music (Hellström et al., 2010) and the distribution of devices or equipment (Liao et al., 2011; Spence et al., 2011) are beneficial for cardiac post-surgery patients. Yet, Spence and colleagues (2011) found that even when institutionally provided, devices and equipment were infrequently used. The authors posited that patients may feel uncomfortable or unfamiliar with using institutionally provided items and suggested that patients and families be encouraged to bring these items in from home (Spence et al., 2011).

In our study, nurses in the CSICU and ward settings perceived similar benefits of the five types of SPPs. The only statistically significant differences between settings were related to the frequency of use of three distinct practices: providing headphones, ear plugs, and pre-operative teaching regarding post-surgery sleep. This differs from Ye and colleagues' (2013) study in which they found that the use of sleep promotion strategies, such as ensuring an adequate environment conducive to sleep, decreasing noise, and limiting light varied depending on the unit involved. Hellström et al. (2010) found that there were challenges to implementing the same sleep promotion intervention used across multiple settings. Although the evidence to date is based on relatively small samples, it is reasonable to consider implementing similar SPPs across settings and populations. However, strategies to individualize interventions based on patient needs and preferences must also be considered.

Barriers and Enablers to Sleep Promotion Practices

In our study, the number of enablers (n = 45) to SPPs identified by the nurses substantially outweighed the number of barriers (n = 15). This is important because it suggests that nurses are set up for success to promote sleep for their inpatients. We revealed that 97% of nurses across both settings currently asked inpatients and/or their families about the sleep promotion strategies that work well for them. This finding was similar to Ye et al.'s study (2013) in which open dialogue with patients and individualized interventions were also identified as enablers.

Nurses in our study reportedly acquired most of their sleep promotion knowledge and skills from personal experience or advice from mentors. This finding aligns with the literature indicating that nurses lack formal training regarding the importance of patients' sleep and how to promote it (Massengale et al., 2015; Ye et al., 2013). Similar to Ye et al. (2013), our findings also suggest that while nurses have the knowledge of the importance of sleep for inpatients, they have competing priorities of care, and lack recognition and support from healthcare managers.

Implications for Cardiovascular Nursing

This study provides important considerations for SPPs in cardiovascular nursing, within the realms of practice, education, and research.

In clinical practice, nurses are uniquely positioned to identify sleep deprivation and promote and address sleep for inpatients. The prioritization of SPPs on surgical cardiovascular units could be accomplished by establishing sleep protocols and guidelines. Kamdar et al. (2016) found that healthcare providers who used sleep promotion protocols were better able to assess their patients' sleeping patterns, had control over lighting conditions and levels of environmental noise, and were able to delay non-urgent nursing care to allow their patient to sleep; however, those who did not have established sleep promotion protocols were more likely to interrupt their inpatients' sleep. We suggest the development of nursing protocols and guidelines that consider the barriers and enablers identified in our study to promote sleep in post-operative cardiac surgery inpatients.

Implications for nursing education include garnering support from the management team, which often begins with raising awareness regarding the impact of quality sleep on patient outcomes. For example, in a multi-national study of nurse managers from 522 ICUs, only nine percent of the ICUs had sleep protocols for managing poor sleep and only one percent utilized patient sleep assessment questionnaires (Hofhuis et al., 2018). Since lack of managerial support was identified as a barrier, our study provides an impetus for nurses in leadership positions (e.g., managers) to consider integrating institutional policies and procedures to ensure adequate sleep promotion in their workplace. Based on our findings, clinical nurses do, in fact, have the knowledge of the importance of sleep for their inpatients. Therefore, it is important to consider and plan strategies to overcome the barriers that prevent nurses from applying this knowledge. As echoed in the literature, we also recommend including sleep content in academic educational programs and ongoing continuing professional development opportunities for cardiovascular nurses (Gellerstedt et al., 2019).

Although we identified barriers and enablers to SPPs in our study, further research using a qualitative approach is needed to gain greater insight into these key influencing factors for effective SPPs. Additional quantitative research, focused on evaluating nurse-led SPP interventions, is also needed, as it has been demonstrated that nurse-led interventions help to understand, treat, and prevent poor sleep (Calik & Fink, 2022). Process evaluations of implementation efforts that explore existing unit workflows, use of SPPs, available resources, and the influence of nursing leadership on SPP implementation could reveal important insights. Finally, as the post-operative cardiac patient's perspective on sleep and SPPs is essential to inform optimal SPPs, this gap in current evidence should also be addressed.

In summary, key implications for cardiovascular nurses regarding using SPPs in practice include the development of evidence-based guidelines and protcols. Within education, garnering support from management and those in leadership positions, and ensuring foundational and continuing education for nurses is recommended. In regards to research, additional qualitative and quantitative studies are needed to ensure an evidence-based approach to effective SPPs in the care of post-operative cardiac surgery patients.

Strengths and Limitations

This study is novel in that it presented types and frequencies of SPPs from the cardiovascular nurses' perspectives. In addition, we used the TDF, a novel behaviour change theoretical approach, to identify barriers and enablers to SPPs in the cardiovascular context.

Nonetheless, our study also had several limitations. First, this was a single site study with a relatively small sample size; however, it provides a foundation for further research in this area. Second, the opt-in sampling strategy may have led to self-selection bias. Nurses who chose not to participate may hold different views about sleep promotion than we captured in our results. Third, although decreasing noise was identified as the most beneficial SPP, our questionnaire did not include an item that assessed noise as a factor. Hence, any data regarding factors associated with noise would have been missed. Fourth, the questionnaire was developed by the research team and was not formally validated, nor reliability tested prior to implementing this study. However, during the questionnaire development process, we made concerted efforts to ensure an adequate level of rigour, such as basing original items on existing TDF questionnaires that have been validated, verifying face and content validity of our modified items with TDF and sleep experts, and three iterative rounds of pre-testing.

Conclusion

Sleep is essential for the health and recovery of post-operative cardiac surgery patients. In this study, the most commonly used SPPs by nurses were orienting inpatients to their room, providing additional bedding, and dimming or turning off bright lights. The enablers to SPPs far outnumbered the barriers, with few differences between the CSICU and the wards. We identified barriers and enablers that can be targeted in the design and development of interventions and initiatives for clinical practice, education, and research that have the potential to promote nurses' use of SPPs in the care of post-operative cardiac surgery inpatients. Finally, using a comprehensive behaviour change framework to guide our study was useful in identifying factors that may influence SPP behaviours.

Highlights

- Suboptimal sleep is common in post-operative cardiac surgery patients and reportedly has a negative impact on patient outcomes.
- Our findings suggest that nurses have the knowledge to promote sleep in their patients, yet they face barriers applying this knowledge in clinical practice.
- A theory-guided, evidence-based approach to identifying factors that may influence sleep promotion was an invaluable first step to developing interventions to promote nurses' use of sleep promotion practices.

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REFERENCES

Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E. M., Colquhoun, H., Grimshaw, J. M., Lawton, R., & Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science, 12*(1), 1–18. https://doi.org/10.1186/s13012-017- 0605-9

Boitor, M., Martorella, G., Maheu, C., Laizner, A., & Gélinas, C. (2019). Does hand massage have sustained effects on pain intensity and pain-related interference in the cardiac surgery critically ill? A randomized controlled trial. *Pain Management Nursing, 20*(6), 572–579. https://doi.org/10.1016/j.pmn.2019.02.011

Buysse, D. (2014). Sleep health: Can we define it? Does it matter? *SLEEP, 37*(1), 9-17. ttps://doi.org/10.5665/sleep.3298

Calik, M. W., & Fink, M. (2022). Cardiovascular consequences of disordered sleep. *Journal of Cardiovascular Nursing, 37*(2) 102–103. https://doi.org/10.1097/JCN.0000000000000890

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the Theoretical Domains Framework for use in behaviour change and implementation research. *Implementation Science, 7,* 1–17. https://doi.org/10.1186/1748-5908-7-37

Caruana, N., McKinley, S., Elliot, R., & Gholizadeh, L. (2018). Sleep quality during and after cardiothoracic intensive care and psychological health during recovery. *Journal of Cardiovascular Nursing.* 33(4). E40–E49. https://doi.org/10.1097/JCN.0000000000000499

Casida, J., Davis, J., Shpakoff, L., & Yarandi, H. (2013). An exploratory study of the patients' sleep patterns and inflammatory response following cardiopulmonary bypass (CPB). *Journal of Clinical Nursing, 23*(15-16), 2332–2342. https://doi.org/10.1111/jocn.12515

Casida, J., Davis, J., Zalewski, A., & Yang, J. (2018). Night-time care routine interaction and sleep disruption in adult cardiac surgery. *Journal of Clinical Nursing, 27*(7–8), e1377–e1384. https://doi.org/10.1111/jocn.14262

Choudhury, M., Gupta, A., Hote, M., Kapoor, P., Khanna, S., Kalaivani, M., & Kiran, U. (2017). Does sleep quality affects the immediate clinical outcome in patients undergoing coronary artery bypass grafting: A clinico-biochemical correlation. *Annals of Cardiac Anaesthesia, 20*(2), 193–199. https://doi.org/10.4103/aca.ACA_30_17

Collins, D. (2003). Pretesting survey elements: An overview of cognitive methods. *Quality of Life Research, 12,* 229–238. Kluwer Academic Publishers.

Gellerstedt, L., Medin, J., Kumlin, M., & Karlsson, M. R. (2015). Nurse's experiences of hospitalised patients' sleep in Sweden: A qualitative study. *Journal of Clinical Nursing, 24*(23–24), 3664–3673. https://doi.org/10.1111/jocn.12985

Gellerstedt, L., Medin, J., Kumlin, M., & Karlsson, M. R. (2019). Nursing care and management of patients' sleep during hospitalisation: A cross-sectional study. *Journal of Clinical Nursing, 28*(19–20), 3400–3407. https://doi.org/10.1111/jocn.14915

Gnich, W., Bonetti, D., Sherriff, A., Sharma, S., Conway, D. I., & Macpherson, L. M. D. (2015). Use of the theoretical domains framework to further understanding of what influences application of fluoride varnish to children's teeth: A national survey of general dental practitioners in Scotland. *Community Dentistry and Oral Epidemiology, 43*(3), 272–281. https://doi.org/10.1111/cdoe.12151

Greve, H., & Pedersen, P. U. (2016). Improving sleep after open heart surgery: Effectiveness of nursing interventions. *Journal of Nursing Education and Practice, 6*(3), 15–22. https://doi.org/10.5430/jnep.v6n3p15

Guo, P., East, L., & Arthur, A. (2012). A preoperative education intervention to reduce anxiety and improve recovery among Chinese cardiac patients: A randomized controlled trial. *International Journal of Nursing Studies, 49*(2), 129–137. https://doi.org/10.1016/j.ijnurstu.2011.08.008

Hadjibalassi, M., Lambrinou, E., Papastavrou, E., & Papathanassoglou, E. (2018). The effect of guided imagery on physiological and psychological outcomes of adult ICU patients: A systematic literature review and methodological implications. *Australian Critical Care, 31*(2), 73–86. https://doi.org/10.1016/j.aucc.2017.03.001

Hellström, A., Fagerström, C., & Willman, A. (2010). Promoting sleep by nursing interventions in health care settings: A systematic review. *Worldviews on Evidenced-Based Nursing, 8*(3), 128–42. https://doi.org/10.1111/j.1741-6787.2010.00203.x

Hofhuis, J. G. M., Rose, L., Blackwood, B., Akerman, E., McGaughey, J., Egerod, I., Fossum, M., Foss, H., Georgiou, E., Graff, H. J., Kalafati, M., Sperlinga, R., Berardo, A., Schäfer, A., Wojnicka, A. G., & Spronk, P. E. (2018). Clinical practices to promote sleep in the ICU: A multinational survey. *International Journal of Nursing Studies, 81*, 107–114. https://doi.org/10.1016/j.ijnurstu.2018.03.001

Hu, R., Jiang, X., Chen, J., Zeng, Z., Chen, X., Li, Y., Huining, X., Evans, D. J. W., & Wang, S. (2015). Non-pharmacological interventions for sleep promotion in the intensive care unit. *The Cochrane Database of Systematic Reviews, 10*, 1–101. https://doi.org/10.1002/14651858.CD008808.pub2

Huijg, J., Gebhardt, W. A., Crone, M. R., Dusseldorp, E., & Presseau, J. (2014). Discriminant content validity of a theoretical framework questionnaire for use in implementation research. *Implementation Science, 9*, 11–27. https://doi.org/10.1186/1748-5908-9-11

Huijg, J. M., Gebhardt, W. A., Dusseldorp, E., Verheijden, M. W., van der Zouwe, N., Middelkoop, B. J., & Crone, M. R. (2014). Measuring determinants of implementation behavior: Psychometric properties of a questionnaire based on the theoretical domains framework. *Implementation Science, 9*, 33–48. https://doi.org/10.1186/1748-5908-9-33

Kamdar, B. B., Knauert, M. P., Jones, S. F., Parsons, E. C., Parthasarathy, S., & Pisani, M. A. (2016). Perceptions and practices regarding sleep in the ICU: A survey of 1,223 critical care providers. *Annals of the American Thoracic Society, 13*, 1370–1377. https://doi.org/10.1513/AnnalsATS.201601-087OC

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology (2nd edition)*. Sage Publications Inc.

Le, A., Friese, R., Hsu, C., Wynne, J., Rhee, P., & O'Keeffe, T. (2012). Sleep disruptions and nocturnal nursing interactions in the intensive care unit. *Journal of Surgical Research, 177*(2), 310–314. https://doi.org/10.1016/j.jss.2012.05.038

Liao, W., Huang, C., Huang, T., & Hwang, S. (2011). A systematic review of sleep patterns and factors that disturb sleep after heart surgery. *Journal of Nursing Research, 19*(4), 275–288. https://doi.org/10.1097/JNR.0b013e318236cf68

Machado, F. S., Souza, R. C. S., Poveda, V. B., & Costa, A. L. S. (2017). Non-pharmacological interventions to promote sleep of patients after cardiac surgery: A systematic review. *Revista Latino-Americana de Enfermagem, 25*, 2926–2936. https://doi.org/10.1590/1518-8345.1917.2926

Massengale, J., Murphy, M., Cadena, S., & Wang, T. (2015). *The role of nursing practice in promoting sleep during brain injury rehabilitation* (Publication No. 3718796) [Doctoral dissertation, Walden University]. ProQuest Dissertations Publishing.

Matukaitis, J., Eckman, T., Baxter, K., Bradley, E., Hawrylack, H., Johnson, S., Mooney, R., Papanicolas, D., & Briggs, P. (2014). Sleepless in stepdown. *Nursing, 2014, 44*(7), 15–18. https://doi.org/10.1097/01.NURSE.0000450790.10849.13

Michie, S., Johnston, M., Abraham, C., Lawton, R., Parker, D., & Walker, A. (2005). Making psychological theory useful for implementing evidence based practice: A consensus approach. *Quality and Safety in Health Care, 14*(1), 26–33. https://doi.org/10.1136/qshc.2004.011155

Polit, D. F. (2010). T Tests: Testing two mean differences. In M. Connor (Ed). *Statistics and data analysis for nursing research* (pp. 114–136). Pearson Education Inc.

Radtke, K., Obermann, K., & Teymer, L. (2014). Nursing knowledge of physiological and psychological outcomes related to patient sleep deprivation in the acute care setting. *MedSurg Nursing, 23*(3), 178–184.

RedCap (Updated 2020). Research Electronic Data Capture. www.project-recap.org.

Redeker, N. S., & Hedges, C. (2002). Sleep during hospitalization and recovery after cardiac surgery. *Journal of Cardiovascular Nursing, 17*(1), 56–68. https://doi.org/10.1097/00005082-200210000-00006

Skoien, W., Page, K., Parsonage, W., Ashover, S., Milburn, T., & Cullen, L. (2016). Use of the theoretical domains framework to evaluate factors driving successful implementation of the accelerated chest pain risk evaluation (ACRE) project. *Implementation Science, 11*(1), 136–147. https://doi.org/10.1186/s13012-016-0500-9

Soong, Burry, L., Cho, H. J., Gathecha, E., Kisuule, F., Tannenbaum, C., Vijenthira, A., & Morgenthaler, T. (2019). An implementation guide to promote sleep and reduce sedative-hypnotic initiation for noncritically ill inpatients. *Journal of the American Medical Association Internal Medicine, 179*(7), 965–972. https://doi.org/10.1001/jamainternmed.2019.1196

Spence, J. S., Murray, T. M., Tang, A., Butler, R., & Albert, N. (2011). Nighttime noise issues that interrupt sleep after cardiac surgery. *Journal of Nursing Care Quality, 26*(1), 88–95. https://doi.org/10.1097/NCQ.0b013e3181ed939a

Tamrat, R., Huynh-Le, M., & Goyal, M. (2014). Non-pharmacologic interventions to improve the sleep of hospitalized patients: A systematic review. *Journal of General Internal Medicine, 29*(5), 788–795. https://doi.org/10.1007/s11606-013-2640-9

Taylor, N., Parveen, S., Robins, V., Slater, B., & Lawton, R. (2013). Development and initial validation of the influences on patient safety behaviours questionnaire. *Implementation Science, 8*(1), 1–8. https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-8-81

Yayla, A., & Özer, N. (2019). Effects of early mobilization protocol performed after cardiac surgery on patient care outcomes. *International Journal of Nursing Practice, 25*(6). 1–11. https://doi.org/10.1111/ijn.12784

Ye, L., Johnson, S., & Dykes, P. (2013). How do clinicians assess, communicate about, and manage patient sleep in the hospital? *Journal of Nursing Administration, 43*(6), 342–347. https://doi.org/10.097/NNA.0b013e3182942c8a

Zhang, W., Wu, W., Gu, J., Sun, Y., Ye, X., Qiu, W., Su, C., Zhang, S., & Ye, W. (2015). Risk factors for postoperative delirium in patients after coronary artery bypass grafting: A prospective cohort study. *Journal of Critical Care, 30*(3), 606–612. https://doi.org/10.1016/j.jcrc.2015.02.003

Patients' and Nurses' Heart Failure Self-Care Problem Awareness and Feedback on a Proposed Nursing Intervention

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Abstract

Background. *Effective nursing interventions are needed to increase heart-failure self-care (HFSC). The implementation-intention technique, a promising strategy to promote change of health-related behaviours, has not yet been assessed in the context of HFSC.*

Purpose*. To describe patients' and nurses' HFSC problem awareness and elicit their feedback regarding the acceptability and feasibility of an implementation-intention intervention.*

Methods. *We conducted individual semi-structured interviews (n = 7 patients with HF) and a focus group (n = 8 nurses).*

Results*. Patient and nurse participants were familiar with HFSC, as well as its facilitators, including social support, mental health, and a daily routine, and barriers, such as HF symptoms. They felt that the proposed intervention was feasible and would benefit HF patients, but would need to be shortened.*

Conclusions. *The proposed HFSC intervention has the potential to enhance facilitators and overcome barriers to HFSC behaviors.*

Implications*. The results provide guidance to adapt the implementation-intention technique in HF clinical settings.*

Keywords: heart failure, self-care, nursing interventions, patient education

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Worldwide, heart failure (HF) is a major cause of death and disability, affecting nearly 26 million people. In addition, its prevalence is increasing since medical advances have improved the survival rate of cardiovascular disease (Savarese & Lund, 2017). More than 600,000 Canadians live with HF, with 50,000 new patients being diagnosed each year. Heart failure costs more than C$2.8 billion per year (Heart & Stroke Foundation, 2016). Moreover, the COVID-19 pandemic worsened HF outcomes because patients were reluctant to go to the hospital during the lockdown. For example, researchers in a London (UK) hospital observed that the COVID-19 pandemic significantly decreased HF hospitalization rates, but hospitalized HF patients who delayed seeking medical care presented with more severe symptoms on admission (Bromage et al., 2020).

Decompensated heart failure requiring hospitalization is characterized by the exacerbation of HF signs and symptoms, such as breathlessness, leg edema, and elevated jugular venous pressure, and is often attributed to low treatment adherence (Ponikowski et al., 2016). The adoption of specific HF self-care (HFSC) behaviours is the cornerstone in preventing clinical HF decompensation episodes and maintaining quality of life in people with HF (Riegel et al., 2017). These behaviours include, but are not limited to: medication adherence, salt and fluid restriction, daily weights, and physical activity (Heidenreich et al., 2022; McDonagh et al., 2021). Interventions that aim to enhance HFSC behaviours have been shown to significantly reduce HF hospitalizations and readmissions (Cui et al., 2019; McAlister et al., 2004). Many patients, however, do not engage in HFSC behaviours (Aghajanloo et al., 2021). Many barriers related to the challenges of managing HF explain this HFSC adherence problem, including: poor health status, depression, cognitive deficits, multiple comorbidities, and social isolation (Attaallah et al., 2016). Self-care interventions aim to support patients to self-manage HF by providing education and improving their confidence to target specific goals (Toback & Clark, 2017). Nurses play a key role in improving HFSC, but more rigorous research is needed to find the most effective strategies in this endeavour (Bryant et al., 2017; Stamp et al., 2018; Toback & Clark, 2017).

Theoretical Framework

Two frameworks guided this study: the situation-specific theory of HFSC and the implementation-intention technique. The first seeks to explain how situational factors influence the adoption of HFSC behaviours. According to the situation-specific theory of HFSC, HFSC behaviours are the results of a naturalistic decision-making (NDM) process, which recognizes that real-life decisions are based on conditions of uncertainty, time constraints, and many varied contexts (Riegel et al., 2016). This means that every decision is made under a different set of influencing factors, such as situations in which there is the pressure of time, when only incomplete information is available (e.g., nutritional values when ordering at a restaurant), or when the decisions might go against one's values and goals, or involve other people (Riegel et al., 2016). This theory explains why similar health dilemmas that occur in different settings generate inconsistent decisions about HFSC.

The second framework is the technique on which our proposed educational intervention is based. The implementation-intention approach is an educational technique that has been shown to help motivated individuals make more consistent health decisions within a variety of real-life contexts, by reducing the *intention-behaviour gap* (Gollwitzer, 1999; Hagger et al., 2016; Kompf, 2020; Malaguti et al., 2020). With this technique, the participants are invited to detail precise action plans to integrate the intended health-related behaviour into their routine . Coping plans are then specified in an "if–then" format; that is, "*if* condition *x* is encountered, *then* I will perform behaviour *y* to keep achieving the expected behaviour" (Hagger et al., 2016). In the context of HF, nurses first provide HFSC information, if needed, and their patients identify one or more HFSC behaviours they want to improve upon. Then, the patients develop a three-pronged action plan (i.e., when, how, and where) to achieve the targeted behaviour, committing the plan to paper. Lastly, the patients identify three barriers that may prevent them from adopting the behaviour and strategies to overcome them; for example: "I want to walk every morning in my neighbourhood, but I don't like to walk when it rains. So, *if* it rains, *then* I will walk in the shopping mall." On subsequent clinic visits, nurses evaluate their patients' progress in adopting the intended behaviours and patients update the plans if necessary, either to adopt a new behaviour or to overcome new or existing barriers. While the empirical and theoretical bases of the implementation-intention technique have been well established (Hagger et al., 2016; Hagger & Luszczynska, 2014), the technique's usefulness in the context of HF clinics has not yet been evaluated. The choice of this intervention in the context of HFSC behaviours is consistent with the NDM process, because this strategy takes into consideration the many elements influencing real-life decisions that HF patients need to make on a daily basis (Jaarsma et al., 2017).

We also adopted Sidani and Braden's (2011) guidelines, which are composed of theory-based, empirical, and experiential steps to successfully design and implement interventions in real-life practice. Nurses are well positioned to assist patients identify barriers to adopting personal HFSC behaviours, as well as realistic strategies to overcome these barriers. However, nurses are unlikely to implement interventions of limited relevance to practice. Therefore, Sidani and Braden (2011) suggest involving the target population in an experiential approach, in order to enhance the acceptability and feasibility of a proposed intervention. The experiential approach is characterized by the active participation of the target population in designing and assessing an intervention and relies on feedback from clients who will receive and deliver the intervention (Sidani & Braden, 2011; Sidani et al., 2016).

Therefore, the objective of this study was to describe patients' and nurses' HFSC problem awareness, as well as to elicit their feedback regarding the acceptability and feasibility of a proposed HFSC implementation-intention nursing intervention. Our overall goal is to ultimately improve HF patients' HFSC behaviours.

Methods

Design

We designed a descriptive, qualitative study (Doyle et al., 2020) that followed the guidelines of Sidani and Braden (2011) to plan implementable nursing interventions. A descriptive study is a method of choice to produce clinically meaningful research when the focus is to identify how a planned intervention might be improved (Doyle et al., 2020). This paper adheres to the Consolidated Criteria for Reporting Qualitative Research (COREQ), using a 32-item checklist for interviews and focus groups (Tong et al., 2007). Research ethics approval for this study was obtained from the Quebec Heart and Lung Institute Research Centre Ethics Board (certificate #20830).

Setting and Sample

The setting for this project was a specialized ambulatory HF clinic of a tertiary-care public hospital in Quebec, Canada: the Quebec Heart and Lung Institute. With more than 3,000 employees and volunteers, this supraregional hospital has 338 beds and serves a population base of greater than 2 million. Our hospital specializes in the care of patients with cardiopulmonary diseases and obesity-related disorders. The ambulatory HF clinic aims to reduce readmissions and ER visits, enhance access to care, and improve the quality of life of our 1,040 patients with HF. The clinic is supported by a team of cardiologists, cardiovascular surgeons, specialized cardiology nurse practitioners, clinical registered nurses, pharmacists, and a nutritionist.

Project participants included HF patients and nurses from the specialized ambulatory HF clinic. The inclusion criteria for patients were the ability to speak French and a diagnosis of HF within the previous 12 months. Patients with

diagnosed cognitive disorders, such as Alzheimer's disease or dementia, who had been hospitalized for HF decompensation in the previous month, or who were visiting the clinic for the first time at the time of the study were excluded. The lead researcher (KD) shared the inclusion and exclusion criteria with the nurses and the head nurse working at the clinic to engage them in identifying potential participants. Of the nine patients who met the project criteria, and were invited to participate, two declined due to lack of interest.

To be included in the study, the nurses had to be clinical registered nurses employed by the specialized ambulatory HF clinic. There were no exclusion criteria for nurses.

Procedures

Recruitment

Convenience sampling was used to recruit the patients and nurses. Patients were enrolled successively until data saturation was achieved (Glaser & Strauss, 1967). Saturation criteria were met with the seventh interview, and the interviews were terminated. All eight clinical registered nurses working in the clinic were approached by the lead researcher and consented to take part in the study.

Patients meeting the study criteria were approached at the HF clinic by the lead researcher to verify their eligibility and willingness to participate in this study. Once they consented to participate, a mutually agreed upon date, time, and place for their individual interview was confirmed within the next month. Patients were then given a short study information sheet with the lead researcher's contact information. A focus group was scheduled for a time that was convenient for all nurse participants; however, because of scheduling difficulties, we did not conduct a focus group for the patients.

Data Collection

The individual patient interviews were conducted in a private room at the HF clinic to ensure confidentiality. The semi-structured interviews lasted from 45 to 60 minutes and were led by the lead researcher, who was trained and prepared to conduct the interviews. The nurses' focus group was conducted in a private lunchroom at the HF clinic, ensuring confidentiality, and lasted 53 minutes. The focus group was guided by the lead researcher, who was trained and prepared to facilitate a focus group. At the appointed times, processes for informed consent were followed prior to eliciting the patients' and nurses' written consent.

Interview and Focus-Group Guides

The lead researcher designed the interview guides based on the study's aims, the theoretical frameworks, and the literature. The interview guides were then assessed for face validity by five nursing researchers known for their expertise in cardiology, qualitative studies, and nursing interventions. No specific information on HFSC or the proposed intervention were provided before the interviews and the focus group. The key questions from the interview guides are provided in Table 1.

We assessed the acceptability of the proposed intervention by asking the participants if they would be interested in participating in this type of intervention. We assessed the feasibility of the intervention by asking patients how the proposed intervention could be improved to better fulfill their needs and by asking nurses how it could be modified to be successfully implemented within their clinical setting. The individual interviews and the focus group were audio-recorded. No field notes were taken during the data collection process.

Table 1

Key questions guiding the semi-structured interviews for the patients and the focus group with the nurses

Patients
Introductory question
What does self-care mean to you?
Transition questions about their experience with HFSC and HF disease management
What comes to mind when you hear about HFSC?
What does it mean to manage your heart-failure disease?
What is important for you to do in the management of your heart failure on a daily basis?
What makes the achievement of self-care easier / more difficult on a daily basis?
Key questions about the proposed implementation-intention nursing intervention
How willing would you be to take part in this intervention with your nurse?
Do you think this intervention would be accepted by other patients with heart failure? Why? Why not?
Would this intervention meet your needs? How so (or how not)?
Do you think this intervention is feasible for you? How so (or not)?
Should we target a single self-care behaviour with this intervention or more than one at a time?
Do you have any suggestions for improving this intervention?
Nurses
Introductory question
What comes to mind when you hear about self-care in heart failure?
Transition questions about the management of patients with HF
What does it mean to you to care for patients with heart failure?
What is important to consider when teaching self-care to patients?
What makes achieving daily HFSC difficult or easy for patients?
Key questions about the proposed implementation-intention nursing intervention
Would you agree to perform this intervention with the patients you care for? Why (or why not)?
Could nurses intervene this way within their clinical setting? Explain.
Considering your typical daily workload, how feasible is this intervention?
How many HFSC behaviours should we target at once with this intervention?
Do you have any suggestions for improving this intervention?

Data Analysis

The data were analyzed through directed content analysis, which allows for the quantification of data (Assarroudi et al., 2018; Doyle et al., 2020; Hsieh & Shannon, 2005). This method is deductive, since most of the categories of codes were predetermined based on the questions in the interview guides. This method also allows for new codes and categories to emerge from the data (Assarroudi et al., 2018; Hsieh & Shannon, 2005). The lead researcher transcribed the audio-recorded interviews verbatim. The data were entered in Microsoft Word and organized within a priori categories established by the interview questions: 18 categories for the patients and 16 for the nurses. Two researchers read the verbatim transcriptions several times to form a general impression of the written data. Similar ideas were highlighted and summarized in meaningful units that were then independently abstracted and labelled with codes by the researchers. These codes were then organized in the pre-established categories. The researchers compared their categorization to ensure the validity of the key themes from participant perspectives. All divergences were discussed until consensus was reached.

Results

Demographics

Table 2 provides participant demographic and clinical information. All seven patient participants were Caucasian with a mean age of 69 years; five were male. Their most common specific comorbidities were hypertension and dyslipidemia. All eight nurse participants were Caucasian with a mean age of 39 years; seven were female.

Participants' HFSC Problem Awareness

We first questioned the target population about their HFSC problem awareness; that is, their knowledge about HFSC and their perceptions about why it is difficult for patients to perform HFSC.

Participants' Definition of HFSC

When asked about self-care (SC), without specifying any context, six patients (86%) stated that it meant to heal oneself at home (see Table 3). Patient 3, a 65-year-old man (NYHA III), said that he did not need SC because "self-care is only for little scrapes." Patient 7, a 70-year-old male (NYHA II), stated that SC might be about "using natural products." When asked about what comes to mind when they hear the expression HFSC, with no examples provided, all patient participants correctly identified HFSC behaviours. They all mentioned the nutritional guidelines (100%) and most mentioned taking their medication (86%). Many of the patient participants also cited weighing themselves regularly (57%) and taking their blood pressure (43%) as important HFSC behaviours. Based on the focus-group discussion, all nurse participants correctly defined HFSC (see Table 3).

Defining the Nursing Role

All the nurse participants agreed that they have a major responsibility in educating HF patients, assessing their HFSC behaviours, and reinforcing positive HFSC behaviours, as well as adapting their teaching strategies to each patient. Nurse 2 stated, "when I see that they do all their HFSC adequately, I tell them: 'This is really good. You're doing great. Keep it up.' I encourage them to continue." Four nurses (50%) pointed out the importance of involving the patients with the interdisciplinary team in the decision-making process.

HFSC Influencing Factors

When asked about what elements facilitated greater HFSC adherence, several patient (57%) and most nurse participants (88%) mentioned social support. Both patient and nurse participants also said that ensuring good mental health and using the recommended tools for adherence, such

Table 2

Demographic and Clinical Information of Patients (n = 7) and Nurses (n = 8)

Patients	Mean (SD)	Min-Max	*n* (%)
Age	67.4 (8.8)	57–85	
Duration of HF diagnosis (in years)	2.4 (1.0)	1–4	
NYHA classification[a]			
I			1 (14%)
II			3 (43%)
III			2 (29%)
IV			1 (14%)
Comorbidities			
Number of associated comorbidities	4.4 (2.1)	1–6	
Hypertension			5 (71%)
Dyslipidemia			4 (57%)
Other cardiovascular disease			5 (71%)
Other[b]			7 (100%)
Nurses			
Age	38.3 (4.7)	35–45	
Experience as a nurse (in years)	16.3 (3.8)	11–21	
Experience with HF patients (in years)	6.4 (3.8)	1.6–11	

[a]NYHA – New York Heart Association Functional Classification.
[b]Other comorbidities: hypothyroidism, hepatic cirrhosis, CABG, scoliosis, tuberculosis, diverticulosis, alcoholism, gastric ulcers, renal failure, and sleep apnea.

Table 3

Patient and Nurse Participants' HFSC Problem Awareness

	Number of Times Code was Mentioned	Frequency of Participants *n* (%)
Patients		
HFSC definition		
Nutrition (low-fat and low-sodium diet, fluid restriction)	31	7 (100%)
Physical exercise	12	7 (100%)
Taking medication as prescribed	6	6 (86%)
Weighing and weight management	7	4 (57%)
Blood-pressure measurements	3	3 (43%)
HFSC facilitators		
Establishing a routine	5	4 (57%)
Support from relatives	5	4 (57%)
Mental well-being	3	2 (29%)
Adapted tools (HF diary)	2	2 (29%)
Having medical knowledge	1	1 (14%)
Asking for medical help if necessary	1	1 (14%)
HFSC barriers		
HF symptoms and comorbidities	5	3 (43%)
Impacts of HF on leisure activities	4	2 (29%)
High number of restrictions	2	2 (29%)
Nurses		
HFSC definition		
HFSC behaviours	21	8 (100%)
Nursing role		
Continuous education, assessment, and reinforcement	41	8 (100%)
Adapt teaching strategies to the patient	20	8 (100%)
Collaborating with the interdisciplinary team and the patient	6	4 (50%)
HFSC facilitators		
Support from relatives	9	7 (88%)
Good mental health	8	6 (75%)
Optimal use of available tools	8	4 (50%)
Having experienced the symptoms at least once	5	3 (38%)
Prioritizing one HFSC behaviour to focus on	7	2 (25%)
HFSC barriers		
Patient-related factors (lack of motivation and knowledge, cognitive impairment, etc)	8	8 (100%)
HF symptoms	7	4 (50%)

as the patient diary, greatly helped patients with their HFSC. Four patients (57%) said that establishing a routine and sticking to it was the "way to go." Patient 5, a 65-year-old female (NYHA II), illustrated this by saying that the most important factor for her was the routine, because "the moment I step out of it, I know [because] I feel weaker the next day." Similarly, Patient 6, a 68-year-old female participant (NYHA IV), stated: "I have a routine. If I tell you that I take my medication at 8:00, it's 8:00. Not 8:01." For the nurses, prioritizing one HFSC behaviour to focus on was deemed helpful for patients.

When discussing HFSC barriers, patient participants highlighted factors related to HF, such as the direct impact of HF on their leisure activities and the imposed restrictions. As an example, Patient 5 stated, "when I was told that I couldn't travel anymore, that was like cutting off both of my legs. [I] was losing my freedom to travel. I felt discouraged and imprisoned." Patients and nurses agreed on the negative effects of HF symptoms and the presence of comorbidities on the adoption of daily HFSC behaviours, because they reduce patients' capacities to engage in these behaviours. Nurses also mentioned, however, that experiencing decompensation symptoms tended to encourage patients to be more adherent afterwards because it makes them realize the importance of HFSC in preventing decompensation episodes. The nurse participants also identified patient-related barriers to HFSC, including lack of motivation, physical limitations, and cognitive impairment.

Participants' Feedback on the Acceptability and Feasibility of the Proposed Intervention

Key points made by patient participants about the proposed nursing intervention were that it could help them envisage simple progressive goals with better achievement rates (71%), that it was customizable to patient needs (71%), and that it would encourage them to perform HFSC (57%). Patient 7, a 70-year-old male (NYHA II), gave an example about how it could help him advance his goals: "It might help me set realistic goals and be accountable …. When you start to walk, you don't start with 30 minutes. You start with 2 minutes. Just once around the house. But every day. Then two times. And three times. And it gets easier." Patient 4, a 57 year-old male (NYHA III), confirmed that this approach would help him prepare contingency plans, such as: "if the weather is bad, my spouse is afraid I will fall. We could go the church and walk in the aisles." Patient 2, an 85 year-old male (NYHA II), said, "I can't speak for the others, but [this intervention] would certainly help me greatly." Nurses concurred that an individualized, structured approach would benefit patients and facilitate interdisciplinary care.

Following the acceptability assessment, we invited the participants to make recommendations to improve the proposed intervention to better fulfill their needs. Both patient and nurse participants agreed that patients amenable to this

intervention must be selected carefully. They suggested that some patients, such as those who are depressed, unreceptive, or cognitively impaired, may not be inclined to, or capable of, participating in this specific intervention. Nurse 1 stated: "I don't think we could do that with every patient. Some of them [...] don't understand their disease well enough to manage self-care behaviours. They're going to be overwhelmed." Patient 1, a 62 year-old male (NYHA I) said: "I think that finding out you have a serious heart condition can lead to depression. So, checking off plans, taking action, when mentally you are not strong enough to do that... it can't be easy for everyone."

In addition, both patient and nurse participants concurred that choosing one behaviour at a time would prevent discouragement. They also suggested taking advantage of the tools already in place, such as the patient diary. Patient participants also stressed the importance of being congratulated on their successes, rather than being reprimanded on their losses, to reduce their anxiety and to feel supported psychologically.

All the nurse participants agreed that, for the intervention to be truly feasible in the clinical setting, it would need to be shorter than five minutes because of significant time constraints. Nurse 6 stated that, "it's an excellent idea, but the intervention shouldn't take too long. We are overwhelmed. We have 15 minutes with our patients to do our assessment, measure their vital signs … Things must work. Fast." To enhance time effectiveness, most nurses (88%) suggested providing printed ready-made plans for patients, and many (75%) also recommended the use of checkboxes rather than requiring patients to write lengthy plans. Finally, nurse participants were also in unanimous agreement that the timing of the intervention is important. For example, introducing the intervention during a patient's first visit at the clinic should be avoided because this initial appointment is too overwhelming and cognitively demanding for them.

Discussion

The objective of this study was to describe patients' and nurses' HFSC problem awareness, as well as to elicit their input regarding the acceptability and feasibility of a proposed implementation-intention nursing intervention. Overall, the findings suggest that this intervention is feasible and would benefit HF patients, but would need to be shortened.

Participants' HFSC Problem Awareness

Whereas our patient participants demonstrated adequate knowledge of HFSC, previous studies have found that patients usually lack adequate knowledge about managing HF (Clark et al., 2009; Clark et al., 2014; Lee et al., 2018). Our participants were generally able to identify behaviours encompassed in all the categories of HFSC, as proposed by Riegel et al. (2016), For example, most mentioned maintenance behaviours, such as being physically active and limiting sodium and liquid intake, while monitoring behaviours, such as regularly weighing themselves, and managing behaviours, such as asking for medical help when HF symptoms appear, were mentioned less frequently. Adequate knowledge is a starting point for patients being amenable to adopting HFSC (Lee et al., 2018; Riegel et al., 2016). The nurses strongly emphasized the importance of their role in educating their patients about HFSC. Knowledge alone, however, is not sufficient to change behaviours. Nurses involved in promoting health-related behaviours should engage in helping patients develop more favourable attitudes and better perception of control and self-efficacy over the intended behaviour (Godin, 2012). The implementation-intention technique assumes prior knowledge of HFSC, and it aims to support patients in finding their own way to overcome adoption obstacles.

In our study, both patients and nurses identified similar factors that facilitate HFSC, including social support and mental health. Similarly, previous studies also indicate that patients who are receiving higher support (Fivecoat et al., 2018; Irani et al., 2019; Vellone et al., 2015) and are mentally healthy (Freedland et al., 2015; Hwang et al., 2014; Hwang et al., 2020) are more likely to engage in HFSC behaviours. A qualitative study describing patients' experiences found that patients feel burdened by the complexity of managing HF and that their emotional struggles affect their ability to engage in HFSC (Nordfonn et al., 2019). Some of our patient participants also mentioned feeling burdened by the many restrictions imposed by HF and its treatment. They also shared the psychological distress associated with the impacts of HF on their leisure activities, such as not being able to travel or visit their family. Thus, our findings support the situation-specific HFSC theory proposed by Riegel et al. (2016) and the results of the aforementioned studies. The implementation-intention technique can be a useful tool in better planning HFSC based on a patient's actual capabilities and priorities while taking into consideration the struggles that could affect their capacity to perform HFSC.

Patients and nurses in our study said that the use of appropriate tools, such as the patient diary, can help with HFSC; this finding corroborates Aamodt et al.'s (2020) study. In addition, many of our patient participants emphasized the importance of establishing a routine. Previous studies have shown that patients can reduce their illness burden by building a routine around the lifestyle changes they need to make in order for these lifestyles to become habits (Arlinghaus & Johnston, 2018; Cohn & Lynch, 2017). The implementation-intention intervention aims to facilitate the integration of HFSC in patients' daily lives by developing a schedule and planning ways to maintain or adopt HFSC behaviours, even when unexpected events occur (Gollwitzer, 1999).

Our patient and nurse participants agreed that HF symptoms and the presence of comorbidities reduce a patient's capacity to engage in HFSC behaviours. Such physical barriers have been well documented in the literature (Negarandeh

et al., 2021; Riegel et al., 2017; Seid et al., 2019; Siabani et al., 2013). In addition, Riegel et al. (2016) posited that "comorbid conditions impair abilities of patients with HF to differentiate the cause of their symptoms and impair SC self-efficacy (p.231)." However, several nurses also mentioned that experiencing decompensation symptoms tends to prompt patients to be more compliant because it makes them realize the importance of HFSC to prevent decompensation events. The points raised by our participants support the need for nurses to adapt their educational approach through constant reassessment of their patients' perceptions and ability to implement HFSC, and to diligently use patients' experience of symptoms as a leverage to promote HFSC.

In summary, our findings provide empirical data that supports past research and the situation-specific theory of HFSC proposed by Riegel et al. (2016). Our results illustrate how the person, problem, and environmental factors influence patients' decision-making related to HFSC and why adopting HFSC in their daily routines is so challenging.

Participants' Feedback on the Acceptability and Feasibility of the Proposed Intervention

Our findings support our strategy to increase the acceptability and feasibility of the proposed intervention by eliciting feedback from HF patients and nurses on the design and assessment of the implementation-intention technique. Their suggestions regarding strategies to overcome obstacles are consistent with the HFSC adherence challenge, thus enhancing the acceptability of the intervention. Patients' decisions about HFSC are influenced by the naturalistic decision-making (NDM) process, where real-life decisions are based on conditions of uncertainty, time constraints, and many varied contexts (Riegel et al., 2016). These influencing factors are unique to the individual's problem, environment, skills, knowledge, and values. The implementation-intention technique takes into account each of these individual factors. Indeed, when developing a personalized plan for improving HFSC, nurses individualize their support according to their patient's particular situation. It is feasible for a patient to use collaborative and dyadic planning with nurses, which adds to the social aspect of planning that is so important for them (Hagger & Luszczynska, 2014). Furthermore, this dyadic planning can facilitate the exploration of appropriate cues to action that are relevant to the individual patient.

Finally, it is important to highlight that the feasibility of the proposed intervention for the nurses was conditional on its duration. According to the nurses in our study, because of their already heavy workload, the intervention should be limited to five minutes. Their suggestions for shortening the intervention are consistent with previous research, including the use of a checklist with a comprehensive list of examples of cues to action and possible behavioural responses, and leaving blank spaces for those patients who want to propose alternate plans, as well as having examples of plans on hand and using some of their existing tools, such as the patient diary (Hagger & Luszczynska, 2014).

Implications for Practice, Research, and Education

This study contributes to the area of clinical nursing interventions for patients with HF. Moreover, we have highlighted key adjustments to nursing interventions to maximize their feasibility in HF clinical settings. Implications for clinical practice are related to the implementation of the most adapted and efficient intervention possible to promote HFSC. First-generation interventions merely aimed to increase knowledge transmission to change health-related behaviours, but this study highlights the importance of considering patients' knowledge acquisition merely as the starting point of a long process (Godin, 2012).The successful adoption and maintenance of new health-related behaviours depend on various strategies aimed at supporting patients' intention to comply, starting with knowledge aquisition. Our results inform HF clinical nurses of a new approach that can help them deliver optimal and individualized care to their patients. This co-created intervention may lead to positive impacts on patients' health outcomes, such as increased HFSC adherence and quality of life, and decreased healthcare costs. The implementation-intention technique could be adapted to the needs of patients who live with other chronic diseases that necessitate self-management, such as diabetes. Our findings also highlight the central role nurses play in regard to assessment and evaluation of patients' health, HFSC education, and follow-up.

Our results highlight the importance of including the target population in designing a new intervention in order to foresee obstacles or needs for adaptation before the intervention is actually implemented in clinical practice. We also suggest refining the intervention by taking into account the nurses' suggestion and testing its acceptability, feasibility, and efficacy in other HF clinical settings. With respect to further research, it should be mentioned that current recommendations reflect the importance of carrying out this intervention with patients who are already motivated, but unable to perform HFSC behaviours (Hagger & Luszczynska, 2014; Hagger et al., 2016).

Limitations

Because of the small sample of HF patients and nurses selected from a single site, the findings of this research cannot be generalized to wider populations. However, our results can inform future studies. Although our interview guides were not tested for reliability or validity, they were reviewed for face validity by five expert researchers.

Conclusion

In this study, we found that patients and nurses were knowledgeable about HFSC, as well as its facilitators and barriers, such as social support, mental health, daily routine,

and the presence of symptoms. Adapting the proposed implementation-intention technique for nurses in a HF context has the potential to enhance HFSC facilitators and help patients overcome HFSC barriers. Moreover, this technique was acceptable, and with few changes was deemed feasible by our target population. The experiential approach used in this study provided the key input from our target population and will guide us in developing an intervention tailored to our patients' needs and our nurses' clinical reality.

Key Highlights

- HF patients are at risk of decompensation episodes caused by low adherence to HFSC behaviours; effective nursing interventions are needed to increase HFSC behaviours.
- Patients and nurses were knowledgeable about HFSC, as well as its facilitators and barriers.
- The proposed implementation-intention intervention was acceptable, and with minor changes will be feasible to both patients and nurses.
- Involving patients and nurses in the development process will result in the creation of a nursing intervention that is tailored to our patients' needs and our nurses' clinical reality.

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REFERENCES

Aamodt, I. T., Strömberg, A., Hellesø, R., Jaarsma, T., & Lie, I. (2020). Tools to support self-care monitoring at home: Perspectives of patients with heart failure. *International Journal of Environmental Research and Public Health, 17*(23). https://doi.org/10.3390/ijerph17238916

Aghajanloo, A., Negarandeh, R., Janani, L., Tanha, K., & Hoseini-Esfidarjani, S. S. (2021). Self-care status in patients with heart failure: Systematic review and meta-analysis. *Nursing Open, 8*(5), 2235–2248. https://doi.org/10.1002/nop2.805

Arlinghaus, K. R., & Johnston, C. A. (2018). The importance of creating habits and routine. *American Journal of Lifestyle Medicine, 13*(2), 142–144. https://doi.org/10.1177/1559827618818044

Assarroudi, A., Heshmati Nabavi, F., Armat, M. R., Ebadi, A., & Vaismoradi, M. (2018). Directed qualitative content analysis: The description and elaboration of its underpinning methods and data analysis process. *Journal of Research in Nursing: JRN, 23*(1), 42–55. https://doi.org/10.1177/1744987117741667

Attaallah, S., Klymko, ., & Hopp, F. P. (2016). Self-care among older adults with heart failure. *Gerontology and Geriatric Medicine, 2*, 2333721416684013. https://doi.org/10.1177/2333721416684013

Bromage, D. I., Cannatà, A., Rind, I. A., Gregorio, C., Piper, S., Shah, A. M., & McDonagh, T. A. (2020). The impact of COVID-19 on heart failure hospitalization and management: Report from a heart failure unit in London during the peak of the pandemic. *European Journal of Heart Failure, 22*(6), 978–984. https://doi.org/10.1002/ejhf.1925

Bryant, R., Alonzo, A., & Schmillen, H. (2017). Systematic review of provider involvement in heart failure self-care interventions. *Journal of the American Association of Nurse Practitioners, 29*(11), 682–694. https://doi.org/10.1002/2327-6924.12501

Clark, A. M., Freydberg, C. N., McAlister, F. A., Tsuyuki, R. T., Armstrong, P. W., & Strain, L. A. (2009). Patient and informal caregivers' knowledge of heart failure: Necessary but insufficient for effective self-care. *European Journal of Heart Failure, 11*(6), 617–621. https://doi.org/10.1093/eurjhf/hfp058

Clark, A. M., Spaling, M., Harkness, K., Spiers, J., Strachan, P. H., Thompson, D. R., & Currie, K. (2014). Determinants of effective heart failure self-care: A systematic review of patients' and caregivers' perceptions. *Heart, 100*(9), 716–721. https://doi.org/10.1136/heartjnl-2013-304852

Cohn, S., & Lynch, R. (2017). Falling into a routine: From habits to situated practices. *Sociology of Health and Illness, 39*(8), 1398–1411. https://doi.org/10.1111/1467-9566.12597

Cui, X., Zhou, X., Ma, L. L., Sun, T. W., Bishop, L., Gardiner, F. W., & Wang, L. (2019). A nurse-led structured education program improves self-management skills and reduces hospital readmissions in patients with chronic heart failure: A randomized and controlled trial in China. *Rural Remote Health, 19*(2), 5270. https://doi.org/10.22605/rrh5270

Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing, 25*(5), 443–455. https://doi.org/10.1177/1744987119880234

Fivecoat, H. C., Sayers, S. L., & Riegel, B. (2018). Social support predicts self-care confidence in patients with heart failure. *European Journal of Cardiovascular Nursing, 17*(7), 598–604. https://doi.org/10.1177/1474515118762800

Freedland, K. E., Carney, R. M., Rich, M. W., Steinmeyer, B. C., & Rubin, E. H. (2015). Cognitive behavior therapy for depression and self-care in heart failure patients: A randomized clinical trial. *JAMA Internal Medicine, 175*(11), 1773–1782. https://doi.org/10.1001/jamainternmed.2015.5220

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine. https://books.google.ca/books?id=oUxEAQAAIAAJ

Godin, G. (2012). *Les comportements dans le domaine de la santé : comprendre pour mieux intervenir*. Presses de l'Université de Montréal.

Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist, 54*(7), 493–503. https://doi.org/10.1037/0003-066x.54.7.493

Hagger, M. S., & Luszczynska, A. (2014). Implementation intention and action planning interventions in health contexts: State of the research and proposals for the way forward. *Applied Psychology: Health and Well-Being, 6*(1), 1–47. https://doi.org/10.1111/aphw.12017

Hagger, M. S., Luszczynska, A., de Wit, J., Benyamini, Y., Burkert, S., Chamberland, P. E., Chater, A., Dombrowski, S. U., van Dongen, A., French, D. P., Gauchet, A., Hankonen, N., Karekla, M., Kinney, A. Y., Kwasnicka, D., Hing Lo, S., Lopez-Roig, S., Meslot, C., Marques, … Gollwitzer, P. M. (2016). Implementation intention and planning interventions in Health Psychology: Recommendations from the Synergy Expert Group for research and practice. *Psychology & Health, 31*(7), 814–839. https://doi.org/10.1080/08870446.2016.1146719

Heart & Stroke Foundation. (2016). *Report on the health of Canadians: the burden of heart failure.* http://www.heartandstroke.ca

Heidenreich, P. A., Bozkurt, B., Aguilar, D., Allen, L. A., Byun, J. J., Colvin, M. M., Deswal, A., Drazner, M. H., Dunlay, S. M., Evers, L. R., Fang,

J. C., Fedson, S. E., Fonarow, G. C., Hayek, S. S., Hernandez, A. F., Khazanie, P., Kittleson, M. M., Lee, C. S., Link, M. S., … Yancy, C. W. (2022). 2022 AHA/ACC/HFSA guideline for the management of heart failure: A report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation, 145*(18), e895–e1032. https://doi.org/10.1161/cir.0000000000001063

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Hwang, B., Moser, D. K., & Dracup, K. (2014). Knowledge is insufficient for self-care among heart failure patients with psychological distress. *Health Psychology, 33*(7), 588–596. https://doi.org/10.1037/a0033419

Hwang, B., Pelter, M. M., Moser, D. K., & Dracup, K. (2020). Effects of an educational intervention on heart failure knowledge, self-care behaviors, and health-related quality of life of patients with heart failure: Exploring the role of depression. *Patient Education and Counseling, 103*(6), 1201–1208. https://doi.org/10.1016/j.pec.2020.01.007

Irani, E., Moore, S. E., Hickman, R. L., Dolansky, M. A., Josephson, R. A., & Hughes, J. W. (2019). The contribution of living arrangements, social support, and self-efficacy to self-management behaviors among individuals with heart failure: A path analysis. *Journal of Cardiovascular Nursing*. https://doi.org/10.1097/jcn.0000000000000581

Jaarsma, T., Cameron, J., Riegel, B., & Stromberg, A. (2017). Factors related to self-care in heart failure patients according to the Middle-Range Theory of Self-Care of Chronic Illness: A literature update. *Current Heart Failure Reports, 14*(2), 71–77. https://doi.org/10.1007/s11897-017-0324-1

Kompf, J. (2020). Implementation intentions for exercise and physical activity: who do they work for? A systematic review. *Journal of Physical Activity and Health, 17*(3), 349–359. https://doi.org/10.1123/jpah.2018-0720

Lee, K. S., Moser, D. K., & Dracup, K. (2018). Relationship between self-care and comprehensive understanding of heart failure and its signs and symptoms. *European Journal of Cardiovascular Nursing, 17*(6), 496–504. https://doi.org/10.1177/1474515117745056

Malaguti, A., Ciocanel, O., Sani, F., Dillon, J. F., Eriksen, A., & Power, K. (2020). Effectiveness of the use of implementation intentions on reduction of substance use: A meta-analysis. *Drug and Alcohol Dependence, 214*, 108120. https://doi.org/10.1016/j.drugalcdep.2020.108120

McAlister, F. A., Stewart, S., Ferrua, S., & McMurray, J. J. (2004). Multidisciplinary strategies for the management of heart failure patients at high risk for admission: A systematic review of randomized trials. *Journal of the American College of Cardiology, 44*(4), 810–819. https://doi.org/10.1016/j.jacc.2004.05.055

McDonagh, T. A., Metra, M., Adamo, M., Gardner, R. S., Baumbach, A., Böhm, M., Burri, H., Butler, J., Čelutkienė, J., Chioncel, O., Cleland, J. G. F., Coats, A. J. S., Crespo-Leiro, M. G., Farmakis, D., Gilard, M., Heymans, S., Hoes, A. W., Jaarsma, T., Jankowska, E. A., … Kathrine Skibelund, A. (2021). 2021 ESC guidelines for the diagnosis and treatment of acute and chronic heart failure. *European Heart Journal, 42*(36), 3599-3726. https://doi.org/10.1093/eurheartj/ehab368

Negarandeh, R., Aghajanloo, A., & Seylani, K. (2021). Barriers to self-care among patients with heart failure: A qualitative study. *Journal of Caring Sciences, 10*(4), 196–204. https://doi.org/10.34172/jcs.2020.026

Nordfonn, O. K., Morken, I. M., Bru, L. E., & Husebø, A. M. L. (2019). Patients' experience with heart failure treatment and self-care-A qualitative study exploring the burden of treatment. *Journal of Clinical Nursing, 28*(9-10), 1782–1793. https://doi.org/10.1111/jocn.14799

Orbell, S., & Sheeran, P. (1998). 'Inclined abstainers': A problem for predicting health-related behaviour. *British Journal of Social Psychology, 37*(2), 151–165. https://doi.org/10.1111/j.2044-8309.1998.tb01162.x

Ponikowski, P., Voors, A. A., Anker, S. D., Bueno, H., Cleland, J. G., Coats, A. J., Falk, V., Gonzalez-Juanatey, J. R., Harjola, V. P., Jankowska, E. A., Jessup, M., Linde, C., Nihoyannopoulos, P., Parissis, J. T., Pieske, B., Riley, J. P., Rosano, G. M., Ruilope, L. M., Ruschitzka, … van der Meer, P. (2016). 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The task force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC). Developed with the special contribution of the Heart Failure Association (HFA) of the ESC. *European Journal of Heart Failure, 18*(8), 891–975. https://doi.org/10.1002/ejhf.592

Riegel, B., Dickson, V. V., & Faulkner, K. M. (2016). The Situation-Specific Theory of Heart Failure Self-Care: Revised and updated. *Journal of Cardiovascular Nursing, 31*(3), 226–235. https://doi.org/10.1097/jcn.0000000000000244

Riegel, B., Moser, D. K., Buck, H. G., Dickson, V. V., Dunbar, S. B., Lee, C. S., Lennie, T. A., Lindenfeld, J., Mitchell, J. E., Treat-Jacobson, D. J., & Webber, D. E. (2017). Self-care for the prevention and management of cardiovascular disease and stroke: A scientific statement for healthcare professionals from the American Heart Association. *Journal of the American Heart Association, 6*(9). https://doi.org/10.1161/jaha.117.006997

Savarese, G., & Lund, L. H. (2017). Global public health burden of heart failure. *Cardiac Failure Review, 3*(1), 7–11. https://doi.org/10.15420/cfr.2016:25:2

Seid, M. A., Abdela, O. A., & Zeleke, E. G. (2019). Adherence to self-care recommendations and associated factors among adult heart failure patients. From the patients' point of view. *PloS One, 14*(2), e0211768. https://doi.org/10.1371/journal.pone.0211768

Sheeran, P., & Webb, T. L. (2016). The intention-behavior gap. *Social and Personality Psychology Compass, 10*(9), 503–518. https://doi.org/10.1111/spc3.12265

Siabani, S., Leeder, S. R., & Davidson, P. M. (2013). Barriers and facilitators to self-care in chronic heart failure: A meta-synthesis of qualitative studies. *Springerplus, 2*, 320. https://doi.org/10.1186/2193-1801-2-320

Sidani, S., & Braden, C. (2011). *Design, evaluation, and translation of nursing Interventions*. https://doi.org/10.1002/9781118785553

Sidani, S., Manojlovich, M., Doran, D., Fox, M., Covell, C. L., Kelly, H., Jeffs, L., & McAllister, M. (2016). Nurses' Perceptions of interventions for the management of patient-oriented outcomes: A key factor for evidence-based practice. *Worldviews on Evidence-Based Nursing, 13*(1), 66–74. https://doi.org/10.1111/wvn.12129

Stamp, K. D., Prasun, M., Lee, C. S., Jaarsma, T., Piano, M. R., & Albert, N. M. (2018). Nursing research in heart failure care: A position statement of the american association of heart failure nurses (AAHFN). *Heart and Lung, 47*(2), 169–175. https://doi.org/10.1016/j.hrtlng.2018.01.003

Toback, M., & Clark, N. (2017). Strategies to improve self-management in heart failure patients. *Contemporary Nurse, 53*(1), 105–120. https://doi.org/10.1080/10376178.2017.1290537

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care, 19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042

Vallerand, J. R., Rhodes, R. E., Walker, G. J., & Courneya, K. S. (2016). Explaining the aerobic exercise intention-behavior gap in cancer survivors. *American Journal of Health Behavior, 40*(5), 675–684. https://doi.org/10.5993/ajhb.40.5.15

Vellone, E., D'Agostino, F., Buck, H. G., Fida, R., Spatola, C. F., Petruzzo, A., Alvaro, R., & Riegel, B. (2015). The key role of caregiver confidence in the caregiver's contribution to self-care in adults with heart failure. *European Journal of Cardiovascular Nursing, 14*(5), 372–381. https://doi.org/10.1177/1474515114547649

New Voices and Greater Diversity: An Open Call for CJCN Editorial Board Members

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Behind every issue of the *Canadian Journal for Cardiovascular Nursing* (CJCN), there is a dedicated Editorial Board with a shared passion and commitment for advancing scholarship and clinical excellence in cardiovascular nursing. The CJCN Editorial Board is a group of cardiovascular nurses with diverse current and past nursing roles, career stages, areas of cardiovascular nursing expertise and experience, research knowledge and experience, and geographic locations in Canada. This varied team of engaged voices facilitates the ongoing achievement of the CJCN's mission to disseminate important and novel information within the current fast paced, ever changing environment of cardiovascular nursing science and practice.

The CJCN is actively seeking new voices, with even more diverse representation, to join the Editorial Board team. If you have ever pondered being part of a peer-reviewed journal's editorial team, and/or are seeking a new professional challenge, this call is for you. In this column, we outline the duties and responsibilities of Editorial Board Members, the criteria for appointment, and the learning opportunities and benefits that await.

What are the Duties and Responsibilities of CJCN Editorial Board Members?

Editorial Board members are positioned to support the Editor-in-Chief in all aspects of the journal's operations. Our role includes collaborating with the editor on content submitted for publication, adhering to the CJCN's rigorous peer reviewed process, conferring on the strategic direction of the journal, establishing, implementing, and revising editorial policies and procedures, and mentoring novice authors. We also act as ambassadors for the journal, by promoting it to colleagues and enticing new authors. Because of the Journal's double blinded peer review process, we are also able to submit our own manuscripts. Without papers to publish, there is no journal!

The primary duty of the Editorial Board members is to review submitted research and non-research-based manuscripts (e.g., theoretical-based discourses, quality improvement initiatives, clinical practice papers) to advance cardiovascular science and nursing practice. Ideally, the editor assigns the review of the manuscript to an Editorial Board member or guest peer reviewer with interest and expertise in the content area. Generally, reviewing these papers encompasses an assessment of the author(s) ability to 1) present a strong argument for the topic, based on current, relevant literature; 2) achieve methodological rigor, for research/QI projects; 3) effectively present findings/evidence that support the conclusions; 4) convincingly argue the potential relevance to cardiovascular nurses; and 5) meet the expectations of style and clarity of scholarly writing. After reviewing a manuscript, Editorial Board members submit a

summary report to the editor, including their recommendation to accept (with or without revisions) or reject the paper for publication. Editorial Board members are expected to support their reviews by outlining the strengths and weaknesses of the manuscript, as well as providing the author(s) wtih specific constructive feedback about how to meet the expectations for publication. The Editor-in-Chief collates the reviewers' summary reports, makes the final decision, and informs the author(s) regarding acceptance/rejection of the manuscript.

The annual meeting of the CJCN Editorial Board is an opportunity for the Editorial Board to connect and discuss journal operations, including, but not limited to, reviewing CJCN policies and procedures, and setting topical and timely priorities of interest to our readership. For example, the CJCN 2021 Spring-Summer Special Issue on *Women's Heart Health* was borne of Editorial Board discussions. In addition, periodic communication among board members occurs throughout the year regarding specific initiatives or urgent publication issues. The Editor-in-Chief also consults with individual board members, as needed, regarding specific manuscript issues or concerns, such as cases of suspected plagiarism.

Criteria for Appointment to the CJCN Editorial Board

As per the CJCN Editorial Policies and Procedures https://doi.org/ (Canadian Journal of Cardiovascular Nursing, 2019), Editorial Board Members must 1) have at least five years of cardiovascular nursing expertise; 2) hold a current Canadian Council of Cardiovascular Nurses membership; 3) have a minimum of master's preparation; 4) have publishing experience in peer-reviewed journals; 5) be able to work within an eight-week timeframe to review (or coordinate the reviews) of each manuscript; and 6) be willing to assume responsibility for at least three manuscripts per year and recommend other reviewers external to the Editorial Board.

Prior experience on a peer-reviewed journal board, or as a guest peer reviewer for the CJCN is an asset, but not required. The majority of Editorial Board members across most peer-reviewed health journals acquire editorial competencies, capacity, and confidence through informal mentorship and learning while in the role; opportunities for formal training and certifications are sparse (Galipeau et al., 2016; Moher & Altman, 2015). Hence, the Editor and CJCN Editorial Board members are committed to providing rich mentorship to support novice members.

Cultivating Personal and Collective Growth

It is our view that being a CJCN Editorial Board member cultivates personal and collective professional growth. Frequent engagement with reviewing submitted manuscripts fosters the expansion of one's critical appraisal abilities, scholarly writing skills, and the tactful composition and delivery of useful, constructive criticism. It is a prime opportunity for continuous learning and professional growth. As CJCN's Editorial Board team, we place high importance on our critical role in supporting the academic, scholarly writing of our submitting authors.

On a collective level, being part of an editorial team is a valuable opportunity to work closely with, and learn from a diverse group of cardiovascular nurses, to learn more about the process of scientific writing and publishing, and to contribute to the achievement of CJCN's mission and goals. Together, we work to ensure that the CJCN continues to grow as a respected venue to showcase the high-quality cardiovascular nursing research, non-research initiatives, and clinical learnings that we know are underway in Canada. Ultimately, as Editorial Board members, we are motivated and rewarded by the contribution we make to knowledge mobilization within the cardiovascular nursing community, fostering learning amongst our colleagues, and ultimately improving the outcomes of those we serve.

Therefore, we are eager to welcome new, motivated colleagues to our editorial team. If your interests, experience, and expertise align with the journal's mission and focus; if you have a desire to advance scholarship within the field of cardiovascular nursing; and if you are seeking professional growth and a new professional experience, joining the CJCN Editorial Board may be for you. We invite you to reach out to the Editor-in-Chief[1] to express your interest, and/or discuss any questions you may have about this role.

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REFERENCES

Canadian Journal of Cardiovascular Nursing (Revised 2019). *Editorial Policies and Procedures*. https://cccn.ca/_uploads/627bc3b90cf14.pdf

Galipeau, J., Barbour, V., Baskin, P., Bell-Syer, S., Cobey, K., Cumpston, M., Deeks, J., Garner, P., MacLehose, H., Shamseer, L., Straus, S., Tugwell, P., Wager, E., Winker, M., & Moher, D. (2016). A scoping review of competencies for scientific editors of biomedical journals. *BMC Med, 14*, 16. https://doi.org/10.1186/s12916-016-0561-2

Moher, D., & Altman, D. G. (2015). Four proposals to help improve the medical research literature. *PLoS Med, 12*(9), e1001864. https://doi.org/10.1371/journal.pmed.1001864

De nouvelles voix et une plus grande diversité : Appel à devenir membre du comité éditorial de la Revue Canadienne de soins infirmiers cardiovasculaires

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Derrière chaque numéro de la *Revue canadienne de soins infirmiers cardiovasculaires* se cache un comité éditorial dévoué qui partage la même passion et le même engagement à l'égard de l'avancement des connaissances et de l'excellence des soins infirmiers cardiovasculaires. Le comité éditorial de la revue est composé d'infirmières et d'infirmiers spécialisés en soins cardiovasculaires dont les rôles actuels et passés, le niveau d'avancement de carrière, les domaines d'expertise, les connaissances et l'expérience en recherche sont variés. De plus, ces personnes proviennent de différentes régions du Canada. Cette équipe engagée facilite la réalisation de la mission de la Revue canadienne en soins infirmiers cardiovasculaires. Cette mission consiste à diffuser les connaissances scientifiques pertinentes pour la pratique infirmière en soins infirmiers cardiovasculaires en tenant compte du contexte actuel qui est en évolution rapide et constante.

Le comité éditorial de la revue recherche activement de nouvelles voix, avec une représentation encore plus diversifiée, pour se joindre à l'équipe. Si vous avez déjà songé à faire partie de l'équipe éditoriale d'une revue évaluée par les pairs et/ou si vous êtes à la recherche d'un nouveau défi professionnel, cet appel est pour vous. Dans cette rubrique, nous décrivons les fonctions et les responsabilités des membres du comité éditorial, les critères de nomination, ainsi que les possibilités d'apprentissage et les avantages qui vous attendent.

Quelles sont les tâches et les responsabilités des membres du comité éditorial ?

Les membres du comité éditorial sont chargés de soutenir le rédacteur ou la rédactrice en chef dans tous les aspects opérationnels de la revue. Le rôle du comité consiste à évaluer, avec le rédacteur ou la rédactrice en chef, le contenu des articles soumis pour publication, à adhérer au processus rigoureux d'évaluation par les pairs de la revue, à se concerter sur les orientations stratégiques de la revue ainsi qu'à établir, mettre en œuvre et réviser les politiques et procédures éditoriales. Les membres du comité peuvent également être appelés à mentorer des auteurs débutants. Les membres du

comité agissent également en tant qu'ambassadeurs et ambassadrices de la revue en faisant la promotion auprès de leurs collègues et en recrutant de nouveaux auteurs et autrices. Grâce au processus d'évaluation par les pairs en double aveugle de la revue, les membres du comité peuvent également soumettre leurs propres travaux pour publication. Sans article à publier, il n'y a pas de revue!

La tâche principale des membres du comité éditorial est d'évaluer les articles soumis, qu'ils soient fondés sur la recherche ou non (p. ex. discours théoriques, initiatives d'amélioration de la qualité des soins, articles sur la pratique clinique), afin de faire progresser la science cardiovasculaire et la pratique infirmière. Idéalement, le rédacteur ou la rédactrice en chef confie la révision du manuscrit à un membre du comité éditorial ou à un évaluateur invité ayant un intérêt et une expertise dans le domaine concerné. En général, la révision des articles comprend une évaluation de la capacité de l'auteur ou des auteurs à présenter une argumentation solide sur le sujet fondée sur la littérature actuelle et pertinente, à faire preuve de rigueur méthodologique pour les projets de recherche, à présenter efficacement les résultats et les évidences permettant d'appuyer les conclusions, à faire valoir de façon convaincante la pertinence pour les infirmières et infirmiers en soins cardiovasculaires et à répondre aux attentes en matière de style et de clarté de la rédaction scientifique. Après avoir évalué un manuscrit, les membres du comité éditorial soumettent un rapport sommaire au rédacteur ou à la rédactrice en chef, y compris leur recommandation d'accepter (avec ou sans révision) ou de rejeter l'article. Les membres du comité éditorial doivent étayer leurs évaluations en soulignant les forces et les faiblesses du manuscrit et en fournissant à l'auteur ou aux auteurs des commentaires constructifs et spécifiques sur la manière de répondre aux attentes en matière de publication. Le rédacteur ou la rédactrice en chef rassemble les rapports sommaires des évaluateurs, prend la décision finale et informe les auteurs de l'acceptation ou du rejet du manuscrit.

La réunion annuelle du comité éditorial de la revue est l'occasion de rencontrer les autres membres et de discuter des orientations de la revue, y compris, mais sans s'y limiter, la révision des politiques et procédures et l'établissement des priorités selon l'actualité qui intéressent le lectorat. Par exemple, le numéro spécial printemps-été 2021 sur la santé cardiaque des femmes est issu des discussions entre les membres du comité éditorial. En outre, des communications périodiques entre les membres du comité ont lieu tout au long de l'année concernant des initiatives spécifiques ou des questions urgentes concernant la publication. Le rédacteur ou la rédactrice en chef consulte également les membres du comité, au besoin, au sujet de questions ou de préoccupations particulières liées aux manuscrits, comme les cas de plagiat présumé.

Critères de nomination au comité éditorial

Conformément aux politiques et procédures rédactionnelles de la Revue canadienne de soins infirmiers cardiovasculaires (2019), les membres du comité éditorial doivent 1) avoir au moins cinq ans d'expérience en soins infirmiers cardiovasculaires, 2) être membre en règle du Conseil canadien des infirmières et infirmiers en soins cardiovasculaires, 3) avoir minimalement un diplôme de niveau maîtrise, 4) avoir une expérience de publication dans des revues avec révision par les pairs, 5) être capable d'effectuer la révision des manuscrits dans un délai de huit semaines, et 6) être prêts à assumer la responsabilité d'au moins trois manuscrits par an et à recommander d'autres réviseurs externes au comité éditorial au besoin.

Une expérience préalable au sein d'un comité éditorial d'une revue avec révision par les pairs ou en tant qu'évaluateur invité pour la Revue canadienne en soins infirmiers cardiovasculaires est un atout, mais n'est pas obligatoire. La majorité des membres du comité éditorial de la plupart des revues de santé évaluées par les pairs acquièrent des compétences, des capacités et une confiance en soi par le biais d'un mentorat et d'un apprentissage informel pendant qu'ils occupent leur poste puisque les possibilités de formation et de certification officielles sont rares (Galipeau et al., 2016; Moher & Altman, 2015). Par conséquent, le rédacteur ou la rédactrice en chef et les membres du comité éditorial s'engagent à fournir un mentorat pour soutenir les membres novices.

Cultiver la croissance personnelle et collective

Nous sommes d'avis que le fait d'être membre du comité éditorial de la Revue canadienne en soins infirmiers cardiovasculaires favorise la croissance professionnelle personnelle et collective. La participation fréquente à l'évaluation de manuscrits soumis favorise le développement des capacités d'évaluation critique, des compétences en rédaction savante, ainsi que la composition et la transmission avec tact de critiques constructives. Il s'agit d'une excellente occasion d'apprentissage continu et de croissance professionnelle. En tant que membre du comité éditorial, nous accordons une grande importance au rôle essentiel que nous jouons dans le soutien de l'écriture académique et savante.

Sur le plan collectif, faire partie d'une équipe éditoriale est une occasion précieuse de travailler en étroite collaboration avec d'autres infirmières et d'infirmiers spécialisés en soins cardiovasculaires et d'en apprendre davantage sur le processus de rédaction et de publication scientifique ainsi que de contribuer à la réalisation de la mission et des objectifs de la revue. Ensemble, nous veillons à ce que la revue canadienne en soins infirmiers cardiovasculaires continue de croître en tant que lieu respecté pour présenter des résultats

de recherche de haute qualité en soins infirmiers cardiovasculaires, des initiatives et des apprentissages cliniques. Finalement, en tant que membres du comité éditorial, nous sommes motivés et récompensés par la contribution que nous apportons à la mobilisation des connaissances au sein de la communauté des soins infirmiers cardiovasculaires, en favorisant l'apprentissage parmi nos collègues et, finalement, en améliorant les résultats cliniques.

C'est pourquoi nous sommes impatientes d'accueillir de nouveaux collègues motivés dans notre équipe éditoriale. Si vos intérêts, votre expérience et votre expertise correspondent à la mission et à l'orientation de la revue, si vous souhaitez faire progresser la recherche dans le domaine des soins infirmiers cardiovasculaires et si vous êtes à la recherche d'une croissance et d'une nouvelle expérience professionnelle, vous pouvez vous joindre au comité éditorial. Nous vous invitons à communiquer avec la rédactrice en chef[1] pour lui faire part de votre intérêt ou pour discuter de toute question que vous pourriez avoir au sujet de ce rôle.

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RÉFÉRENCES

Galipeau, J., Barbour, V., Baskin, P., Bell-Syer, S., Cobey, K., Cumpston, M., Deeks, J., Garner, P., MacLehose, H., Shamseer, L., Straus, S., Tugwell, P., Wager, E., Winker, M., & Moher, D. (2016). A scoping review of competencies for scientific editors of biomedical journals. *BMC Med, 14*, 16. https://doi.org/10.1186/s12916-016-0561-2

Moher, D., & Altman, D. G. (2015). Four proposals to help improve the medical research literature. *PLoS Med, 12*(9), e1001864. https://doi.org/10.1371/journal.pmed.1001864

Revue canadienne de soins infirmiers cardiovasculaires (Révisé 2019). *Editorial Policies and Procedures.* https://cccn.ca/_uploads/627bc3b90cf14.pdf