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“How to start that conversation?”: Experiences of developing a virtual simulation about sexual health care for breast cancer survivors

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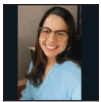
ABSTRACT

Virtual simulation (VS) is an innovative and engaging knowledge translation strategy that can improve healthcare providers' knowledge and skills. However, there is no known literature published related to the use of simulation to improve cancer survivorship care. In this paper, we describe our experience of developing a VS to educate primary healthcare professionals about sexual health disturbances among breast cancer survivors. Based on literature in other

contexts, this VS may help increase health professionals' knowledge and skills needed to assist breast cancer survivors with sexual health concerns. Our VS development experience can be used to encourage and guide other researchers planning to develop similar interventions in the future.

Keywords: Nursing innovation, virtual simulation game, cancer survivors, primary care.

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INTRODUCTION

In Canada, most people living with breast cancer receive treatment from their oncologists and ongoing follow-up care from primary care providers (PCPs), including both nurse practitioners and family physicians (Hudson et al., 2012; Neuman et al., 2016; Ontario, 2019). Navigating among healthcare settings and providers during the transition from active cancer treatment to surveillance period is often fraught with challenges from the perspectives of both patient and healthcare professionals (Neuman et al., 2016). Cancer survivorship care involves a variety of issues, and the prevalence and intensity of issues can vary widely depending on the individual patient, support received, and type of cancer and treatment (Nekhlyudov et al., 2019). Yet, there is evidence highlighting that the psychosocial issue that most commonly affects female cancer survivors, and is poorly addressed by healthcare providers, is sexual problems (Boquiren et al., 2016; Boswell & Dizon, 2015; Luctkar-Flude et al., 2015; Maiorino et al., 2016; Male et al., 2016). Researchers have found that patient embarrassment and perceived PCPs' discomfort are barriers for survivors to seeking sexual health-related services (Dizon et al., 2014); and PCPs' discomfort is often attributed to poor knowledge of how to approach this topic (Luctkar-Flude, 2016). As a result, over 50% of patients report that healthcare professionals do not discuss sexual health (Charif et al., 2016; Dai et al., 2020; Zhou et al., 2015), even though more than 40% of patients experience sexual dysfunction after cancer (Zhou et al., 2015).

Sexual health disturbance among breast cancer survivors may be due to physical and/or psychosocial reasons. These disturbances are usually classified as disorders related to sex, including the act of intercourse, reduced sexual desire, interest, or arousal; orgasmic disorder; and/or genitopelvic pain or penetration disorder (Seav et al., 2015). Additionally, female survivors have substantially less discussion with PCPs about their sexuality when compared with male survivors (11.1% vs 36.7%) (Charif et al., 2016). Although sex is an area of health that is integral to an individual's quality of life, many PCPs are unaware of the magnitude of sexual health issues among

breast cancer survivors (Luctkar-Flude et al., 2015), and survivors often report they would like more information related to their sexuality post-cancer treatment (Albers et al., 2020). Our vision to improve patients' overall survivorship experiences has spurred an education project using simulation to address this gap in PCP knowledge and skills addressing sexual health concerns.

Researchers have demonstrated that simulation-based education is an effective tool to improve healthcare professionals' knowledge and skills in acute and primary care settings (Warren et al., 2016). Although research is still in its nascent stage, screen-based virtual simulations (VS) are an innovative, cost-effective knowledge translation strategy to improve guidelines uptake and can be as effective as in-person high-fidelity simulation (Silva & Dal Vesco, 2020). VS are defined in the literature as computer-mediated interactive experiences that enable the user to achieve specific learning outcomes (Foronda, 2021).

In this paper, VS consists of a series of video clips of a healthcare encounter with decisions for the viewer to make after each scene; each decision-making question has three potential alternatives to minimize cognitive load. Participants are provided with immediate feedback in terms of the rationale for whether their response is correct or incorrect. Depending on the participant's response, they can proceed in the VS or they will need to return to the decision point until the correct answer is selected. Thus, VS can create a favourable learning environment for knowledge acquisition because it is accessible from anywhere, incorporate immediate feedback for learners, and promote psychologically safer learning environments (Haerling, 2018; Verkuyl et al., 2017).

Although it is important to understand the role of simulation-based education concerning PCPs' provision of cancer survivorship care, there is a gap in the literature related to this topic. Recent literature reviews failed to locate any evidence pertaining to the use of clinical simulation for the care of cancer survivors, and the authors recommend that more researchers should target this novel area of investigation (Silva & Dal Vesco, 2020; Silva et al., 2022). However, there are limited reports on how such interventions should be developed.

The purpose of this paper is to describe our experience, including challenges and strengths, of developing a VS based on best-practice guidelines to educate PCPs about sexual health among breast cancer survivors. Our intent is that our experience can be valuable to guide other educators planning to develop similar strategies in the future. We will briefly discuss our experience in developing the simulation content, process of filming and assembling the VS, challenges, and strengths. A detailed step-by-step process for developing the VS is beyond the scope of this paper and is published elsewhere (Canadian Alliance of Nurses Educators Using Simulation, 2022).

DEVELOPING SIMULATION CONTENT

We followed the Canadian Alliance of Nurse Educators using Simulation (CAN-Sim) VS design process (Tyerman et al., 2021) to develop the VS. This is a well-established

step-by-step guide involving completing five CAN-Sim© templates to develop: (1) learning outcomes; (2) an assessment rubric; (3) decision points with responses; (4) detailed decision points with rationale; and (5) filming script.

To incorporate evidence-based approaches to designing simulation, we reviewed the literature to explore how simulation has been used to educate healthcare professionals about cancer survivorship care. After trying different search strategies under the guidance of a librarian in health sciences, there were no studies that met this inclusion criteria (Silva et al., 2022). Thus, we expanded our search criteria to include studies that focused on the evaluation of VS for cancer care (including prevention and screening to survivorship and end-of-life care) among nurses and/or physicians. We followed the Johanna Briggs Institute scoping review methodology (Aromataris & Munn, 2020) and identified 19 studies. This scoping review helped us to identify key aspects to support the feasibility and effectiveness of our VS such as the allocation of resources needed, time constraints, debriefing strategies and more; full results are being published elsewhere (Silva et al., 2022).

Secondly, we brought together a panel of experts in the field to support the development and review of content in the VS to ensure accuracy and relevancy prior to filming. The panel was composed of four clinicians (nurse practitioner, registered nurse, sexuality counsellor and social worker) with working experience in the sexual health of cancer survivors (e.g., work in sexual health clinics), three researchers (nurses with experience and simulation and cancer survivorship care), and a patient partner breast cancer survivor to provide the patient perspective on the topic. Initially, a meeting was held with the experts to identify the main topic for the VS. Based on the clinical experience of those experts, as well as gaps identified in the literature (Luctkar-Flude et al., 2015), one of the major issues identified was that PCPs do not feel comfortable initiating conversations about sexual health. Therefore, we focused our simulation on helping learners to develop the skills to initiate conversations and discuss sexual health with patients during breast cancer survivorship appointments. The VS was entitled, "How to start that conversation? Talking about sexual health with a breast cancer survivor".

After the initial meeting with the panel, the first author was responsible for creating the VS learning outcomes (Table 1). Following review and feedback from the expert panel, the learning outcomes (phase 1) were used to guide the development of the learning outcomes assessment rubric (phase 2), followed by the decision point map (phase 3), the rationale (phase 4), and the filming script (phase 5), which was created based on our clinical experience and using the CAN-Sim templates. Following the same process, all documents were initially created by the first author and sent to the panel for review, and all suggestions received were incorporated into the documents. The entire process for the VS development, after the definition of the panel of experts, took five months (approximately one month per phase).

The PLISSIT (Permission, Limited Information, Specific Suggestions, and Intensive Therapy) framework (Taylor, 2006), a clinical model to guide healthcare professionals

Table 1

Learning Outcomes Based on CAN-Sim Template

PLISSIT	DO WHAT	WHERE/WHEN	WHY
Permission	1 - Create a supportive interaction and ask permission to discuss sexual health.	During follow-up visits with breast cancer survivors <i>E.g., It is common for breast cancer survivors to experience sexual difficulties. Are you ok if I ask you some questions about this aspect?</i>	To promote trust, comfort and establish a foundation for optimal care.
Permission (questions after permission is granted)	2 - Screen for body image disturbance and sexual health dysfunction.	After getting permission to discuss sexual health issues. <i>E.g., Are there any changes in your body after cancer treatment that you think contribute to any sexual difficulties that you're experiencing</i>	To identify need for further assessment and intervention.
Limited Information	3 Provide tailored information and invite questions	Related to sexual health issues <i>E.g., Explain how the treatment received may be impacting in the development of the current issues</i>	To provide patient-centred survivorship care.
Specific Suggestion	4 - Identify interventions the PCP has the ability to provide to the patient.	When exploring possible solutions to issues identified <i>E.g., moisturizers and lubricants (water-based and nonhormonal)</i>	To address patient's specific sexual health concerns.
Intensive Therapy	5 - Refer patient to community resources and services as needed.	When exploring possible solutions to issues identified. <i>E.g., Psychosocial counselling, sexual health clinics, etc.</i>	To ensure all sexual health concerns are addressed.

when having conversations about sexual health in healthcare settings, was also used to support the development of learning outcomes and assessment rubrics. Additionally, for the content, we also used guidelines from Cancer Care Ontario (CCO) (Barbera, 2016), the American Society of Clinical Oncology (ASCO) (Carter et al., 2018), and clinically validated tools (Crowley et al., 2016). Lastly, the Cancer Survivorship Care Quality Framework was used to guide the clinical component of this study related to the provision of cancer survivorship care, particularly the interpersonal and sexual health disturbance sub-domains including indicators and proposed systematic approach to promoting changes in clinical settings, research and policy (Nekhlyudov et al., 2019). More details related to this process can be found in the Figure 1 we developed.

FILMING AND ASSEMBLING THE VS

The VS was filmed in the simulation laboratory in the School of Nursing at Queen's University, Canada, using professional actors to play the roles of the patient and PCP. The filming was done using a GoPro Hero 9 Black action camera with an external microphone. The camera was controlled by connecting it to an iPad using the GoPro Quik app. Other materials used included a tripod, a movie clapper board with

dry-erase markers, and a Neewer LED panel light. The filming process lasted about seven hours, after which, all video clips, photos and documents such as the filming script and decision point map with rationale were sent to a member of the CAN-Sim technology support team to assemble.

The assembly process involved trimming the video clips and inserting them into the CAN-Sim VS template along with the relevant text and photos for each decision point using Articulate Storyline 3 software®. The final VS includes the learning outcomes assessment rubric, a title slide, acknowledgements, game instructions, accessibility statement, learning outcomes, case summary, nine decision-making questions, and a certificate of completion, as well as debriefing options, reflective questions, and additional resources.

As the intervention will be completed online and independently, we used a model of individual reflective briefing and debriefing for this study based on the learning assessment rubrics (Lapum et al., 2019; Verkuyl et al., 2019; Verkuyl et al., 2018). The learning assessment rubric was used to guide the briefing and debriefing as the content for the self-reflection in alignment with the principles of self-regulated learning. To give a visual perspective on how the VS appears on the learner's screen, examples of the game design and rationales can be found in Figure 2. This game can be

Figure 1

Content for the VS Adapted from PLISSIT Model and Existing Guidelines

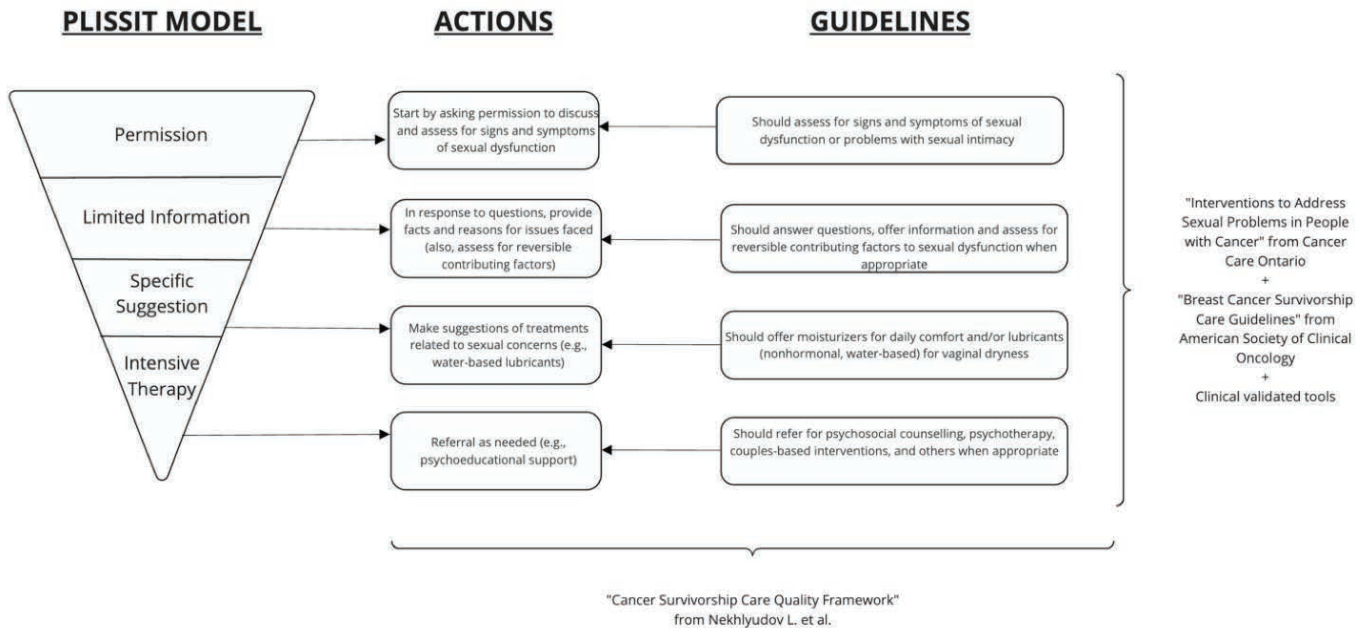


Figure 2

Examples of the Virtual Simulation Game Design and Rationales

Learning Outcomes

1. Create a supportive interaction and ask permission to discuss sexual health during follow-up visits with a breast cancer survivor to promote trust, comfort and establish a foundation for optimal care.
2. Screen for body image disturbance and sexual health dysfunction after getting permission to discuss sexual health issues to identify the need for further assessment and intervention.
3. Provide tailored information and invite questions related to sexual health issues to provide patient-centred survivorship care.
4. Identify interventions the PCP has the ability to provide to the patient when exploring possible solutions to issues identified to address the patient's specific sexual health concerns.
5. Refer patient to community resources services as needed when exploring possible solutions to issues identified to ensure all sexual health concerns are addressed.

Decision 1

00:13 / 00:15

What should be the next action of the PCP?

- Advise the patient to try to adapt to the new conditions and return to a new appointment if this still being a problem for more than 3 months
- Identify interventions that the PCP has the ability to provide to the patient (e.g., lubricants recommendation)
- State that patient needs specialized support that goes beyond PCP scope of practice and therefore a referral will be made

This is the correct choice.

Uses knowledge about existing interventions that can help address the patient's concerns and support providing patient-centred survivorship care.

Continue

accessed at <https://can-sim.ca/accessjama/sexual-health-cancer/#/> and a study is being conducted to evaluate the feasibility of the VS in southeastern Ontario and results are expected to be published in 2023.

PROCESS STRENGTHS AND LESSONS LEARNED

Working as a team was beneficial because it allowed us to learn from the collective experience of the group. For example, the lead simulation developer benefited from the expertise of more experienced team members who were able to predict and prevent problems from occurring through planning in advance. Additionally, all participants involved in VS development were familiar with sexual healthcare, so the team was comfortable to discuss sensitive topics. The CAN-Sim process is well-refined and informed by theory, which streamlined the development process. It was efficient, easy to follow, and we experienced no major challenges while developing the simulation. Recruiting actors was not difficult because of the funding available, but if researchers do not have access to funding it can be challenging to find qualified volunteers to fill the role of actors. Obtaining a space to film the simulation and equipment was facilitated by the support at the team's institution, which is often used for filming simulations. Our collective success is believed to be a result of effective team functioning and institutional support.

Still, some guidelines used to inform the development of the VS provided little information or guidance about some important post-treatment issues that breast cancer survivors may face; and some of the recommendations were conflicting among reports (e.g., ASCO recommends the use of group therapy, whereas CCO neither recommends nor discourages such interventions). In the cases of conflicting information, we used a more generic approach to the recommendation (e.g., recommending the use of therapy overall based on the assessment by a specialist). Also, planning for clear and timely communication with all team members and actors was an important step of the process. Clear role expectations are essential among team members at the beginning of the project to improve the flow of VS development; but the busy schedule of healthcare professionals may be a challenge related to timelines. Lastly, there is no comprehensive evidence on the use of simulation to educate healthcare professionals about cancer survivorship issues, and so, we will only be able to report on the actual feasibility and efficacy of the game after the next steps of this study are completed.

DISCUSSION

As individuals, we are socialized to think about sexuality in a restrictive way and so many people, including healthcare professionals and patients, do not feel comfortable discussing sexual issues (Silva et al., 2021). Breast cancer survivors should be encouraged and empowered to talk about their bodies and sexual health, and healthcare professionals should be qualified to start those discussions in a culturally sensitive way. According to the evidence available in its nascent stage, VSs may help with creating a propitious learning environment for knowledge acquisition (Haerling, 2018; Verkuyt et al., 2017), and PCPs are

open to learning more about this topic (Luctkar-Flude, 2016). However, there is little guidance on how to develop complex interventions in the unique area of sexual health among breast cancer survivors, as well as there is a lack of evidence on the efficacy and efficiency of such interventions.

The use of VS is seen as positive for the learning process as it can be accessed from anywhere (Haerling, 2018; Verkuyt et al., 2017). However, it is also important to consider that for learners to be able to access and complete the game they need to have reliable access to a computer and internet connection, as well as be familiar with how to use those technologies. Our ongoing study will evaluate the feasibility and efficacy of this approach to guideline dissemination in primary care. Although VS can be a cost-efficient strategy to educate PCPs, this tool should be used as an additional component to the educational process instead of as a replacement for clinical education. Integrating this simulation into PCP education is recommended as previous knowledge and background related to sexual health issues is essential for quality healthcare (Silva et al., 2022). Additionally, VSs can and should be used as a knowledge translation strategy to support the incorporation of clinical guidelines into healthcare practices and improve cancer survivorship care.

We felt that the CAN-Sim VS development process can be used to incorporate cancer survivorship care guidelines and support the educational processes of PCPs, but evidence related to this aspect is to be reported in another study. It may be the case that team support and experience with this process were part of what contributed to the overall ease and success of simulation development. We, therefore, recommend that novice VS developers collaborate with people who have experience developing VS where possible. Lastly, according to our scoping review (Silva et al., 2022), educators should also be aware that simulation-based education may require significant resources, including time, for effective implementation, and therefore it may not be recommended for all scenarios.

CONCLUSION

The use of educational tools may improve the quality of the healthcare provided to breast cancer survivors through enhancing professionals' knowledge. In particular, PCPs need training due to their increasing responsibility while becoming the major persons responsible for follow-up care for breast cancer survivors. Simulation-based education can be a suitable option due to recent findings related to its applicability, accessibility, and cost-effectiveness to reach large or busy groups. However, there is a large gap in the literature related to this area, as well as a lack of guidance on how to develop educational strategies in the unique area of cancer survivorship care. This lack of research reinforces the importance of sharing quality improvement data, reflecting on experiences, conducting studies, and publishing results in this novel area. We hope that this report on our VS development experience can be used to guide other researchers planning to produce similar interventions in the future and explore other educational resources to help improve assistance to patients living with or beyond cancer.

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DATA AVAILABILITY STATEMENT

The data supporting the findings of this study are available within the article.

REFERENCES

Albers, L. F., van Belzen, M. A., van Batenburg, C., Engelen, V., Putter, H., Pelger, R. C., & Elzevier, H. W. (2020). Discussing sexuality in cancer care: Towards personalized information for cancer patients and survivors. *Supportive Care in Cancer*, 28(9), 4227–4233.

Barbera, L.C.Z., Elterman, D., McPherson, K., Wolfman, W., Katz, A., & Matthew, A. (2016). Interventions to address sexual problems in people with cancer expert panel. https://www.cancercareontario.ca/sites/ccocancercare/files/guidelines/full/pebc19-6f_1.pdf

Boquiren, V., Esplen, M., Wong, J., Toner, B., Warner, E., & Malik, N. (2016). Sexual functioning in breast cancer survivors experiencing body image disturbance. *J Psycho-oncology*, 25(1), 66–76.

Boswell, E., & Dizon, D. (2015). Breast cancer and sexual function. *J Translational andrology urology*, 4(2), 160.

Canadian Alliance of Nurses Educators Using Simulation. (2022). Virtual simulation games. <https://doi.org/https://can-sim.ca/workshops/>

Cancer Care Ontario (CCO). (2019). *Follow-up model of care for cancer survivors*. <https://www.cancercareontario.ca/sites/ccocancercare/files/guidelines/full/FollowUpModelOfCareCancerSurvivors.pdf>

Carter, J., Lacchetti, C., Andersen, B. L., Barton, D. L., Bolte, S., Damast, S., Diefenbach, M. A., DuHamel, K., Florendo, J., & Ganz, P. A. (2018). Interventions to address sexual problems in people with cancer: American Society of Clinical Oncology clinical practice guideline adaptation of Cancer Care Ontario guideline. *Journal of Clinical Oncology*, 36(5), 492–511.

Charif, A. B., Bouhnik, A.-D., Courbiere, B., Rey, D., Préau, M., Bendiane, M.-K., Peretti-Watel, P., & Mancini, J. (2016). Patient discussion about sexual health with health care providers after cancer—A national survey. *The Journal of Sexual Medicine*, 13(11), 1686–1694. [https://www.jsm.jssexmed.org/article/S1743-6095\(16\)30407-6/fulltext](https://www.jsm.jssexmed.org/article/S1743-6095(16)30407-6/fulltext)

Crowley, S. A., Foley, S. M., Wittmann, D., Jagielski, C. H., Dunn, R. L., Clark, P. M., Griggs, J. J., Peterson, C., Leonard, M., & An, L. C. (2016). Sexual health concerns among cancer survivors: Testing a novel information-need measure among breast and prostate cancer patients. *Journal of Cancer Education*, 31(3), 588–594. <https://link.springer.com/article/10.1007/s13187-015-0865-5>

Dai, Y., Cook, O. Y., Yeganeh, L., Huang, C., Ding, J., & Johnson, C. E. (2020). Patient-reported barriers and facilitators to seeking and accessing support in gynecologic and breast cancer survivors with sexual problems: A systematic review of qualitative and quantitative studies. *The Journal of Sexual Medicine*, 17(7), 1326–1358. [https://www.jsm.jssexmed.org/article/S1743-6095\(20\)30139-9/fulltext](https://www.jsm.jssexmed.org/article/S1743-6095(20)30139-9/fulltext)

Dizon, D. S., Suzin, D., & McIlvenna, S. J. T. o. (2014). Sexual health as a survivorship issue for female cancer survivors. *Oncologist*, 19(2), 202.

CONFLICTS OF INTEREST

M.L. is the Co-president of CAN-Sim and R.B. is the president of CANO; the other authors have no conflict of interest to declare.

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Foronda, C. L. (2021). What is virtual simulation? *Clinical Simulation in Nursing*, 52, 8.

Haerling, K. (2018). Cost-utility analysis of virtual and mannequin-based simulation. *Simul Healthc*, 13(1), 33–40. <https://doi.org/10.1097/SIH.0000000000000280>

Hudson, S. V., Miller, S. M., Hemler, J., Ferrante, J. M., Lyle, J., Oeffinger, K. C., & DiPaola, R. S. J. T. A. o. F. M. (2012). Adult cancer survivors discuss follow-up in primary care: 'Not what I want, but maybe what I need'. *Ann Fam Med*, 10(5), 418–427.

Lapum, J. L., Verkuyl, M., Hughes, M., Romaniuk, D., McCulloch, T., & Mastrilli, P. (2019). Self-debriefing in virtual simulation. *Nurse Educator*, 44(6), E6–E8.

Luctkar-Flude, M., Aiken, A., McColl, M., Tranmer, J., & Langley, H. (2015). Are primary care providers implementing evidence-based care for breast cancer survivors? *Can Fam Physician*, 61(11), 978–984.

Luctkar-Flude, M. F. (2016). *Challenges, strengths and opportunities related to implementing comprehensive evidence-based guidelines on breast cancer survivorship care by primary care physicians and nurse practitioners in Southeastern Ontario* [Queen's University].

Maiorino, M., Chiodini, P., Bellastella, G., Giugliano, D., & Esposito, K. (2016). Sexual dysfunction in women with cancer: A systematic review with meta-analysis of studies using the Female Sexual Function Index. *J Endocrine*, 54(2), 329–341.

Male, D., Fergus, K., & Cullen, K. (2016). Sexual identity after breast cancer: sexuality, body image, and relationship repercussions. *J Current Opinion in Supportive Palliative Care*, 10(1), 66–74.

Nekhlyudov, L., Mollica, M., Jacobsen, P., Mayer, D., Shulman, L., & Geiger, A. (2019). Developing a quality of cancersurvivorship care framework: Implications for clinical care, research, and policy. *J Natl Cancer Inst*, 111(11), 1120–1130. <https://doi.org/10.1093/jnci/djz089>

Neuman, H. B., Jacobs, E. A., Steffens, N. M., Jacobson, N., Tevaarwerk, A., Wilke, L. G., Tucholka, J., & Greenberg, C. C. J. C. m. (2016). Oncologists' perceived barriers to an expanded role for primary care in breast cancer survivorship care. *Cancer Med*, 5(9), 2198–2204.

Seav, S. M., Dominick, S. A., Stepanyuk, B., Gorman, J. R., Chingos, D. T., Ehren, J. L., Krychman, M. L., & Su, H. I. (2015). Management of sexual dysfunction in breast cancer survivors: A systematic review. *Women's midlife health*, 1(1), 1–27.

Silva, A., & Dal Vesco, S. (2020). Ensino baseado em simulação na enfermagem oncológica: revisão integrativa. *Revista Enfermagem Atual In Derme*, 94(32).

Silva, A. R., Caravaca-Morera, J., & Silva, V. (2021). A Philosophical Feminist approach to breast Cancer. *Revista Enfermagem Atual In Derme*, 95(33).

- Silva, A., Galica, J., Woo, K., Ross-White, A., & Luctkar-Flude, M. (2022). The use of simulation-based education in cancer care: A scoping review protocol. *International Journal of Healthcare Simulation – Advances in Theory & Practice* (in press).
- Taylor, B. (2006). Using the extended PLISSIT model to address sexual healthcare needs. *Nursing Standard*, 21(11).
- Tyerman, J., Luctkar-Flude, M., Chumbley, L., Lalonde, M., Peachey, L., McParland, T., & Tregunno, D. (2021). Developing virtual simulation games for presimulation preparation: A user-friendly approach for nurse educators. *Journal of Nursing Education and Practice*, 11(7).
- Verkuyl, M., Hughes, M., Atack, L., McCulloch, T., Lapum, J. L., Romaniuk, D., & St-Amant, O. (2019). Comparison of self-debriefing alone or in combination with group debrief. *Clinical Simulation in Nursing*, 37, 32–39.
- Verkuyl, M., Lapum, J. L., Hughes, M., McCulloch, T., Liu, L., Mastrilli, P., Romaniuk, D., & Betts, L. (2018). Virtual gaming simulation: Exploring self-debriefing, virtual debriefing, and in-person debriefing. *Clinical Simulation in Nursing*, 20, 7–14.
- Verkuyl, M., Romaniuk, D., Atack, L., & Mastrilli, P. (2017). Virtual gaming simulation for nursing education: An experiment. *Clin Simul Nurs*, 13(5), 238–244. <https://doi.org/10.1016/j.ecns.2017.02.004>
- Warren, J., Luctkar-Flude, M., Godfrey, C., & Lukewich, J. (2016). A systematic review of the effectiveness of simulation-based education on satisfaction and learning outcomes in nurse practitioner programs. *Nurse Educ Today*, 46, 99–108. <https://doi.org/10.1016/j.nedt.2016.08.023>
- Zhou, E. S., Nekhlyudov, L., & Bober, S. L. (2015). The primary health care physician and the cancer patient: Tips and strategies for managing sexual health. *Translational Andrology and Urology*, 4(2), 218. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4708119/pdf/tau-04-02-218.pdf>