

The integral role of nurses' knowledge in the multidisciplinary cancer care team for patients' safety and life stability

Roy Matta*

Toulouse Business School,
Toulouse, France
Email: r.matta@tbs-education.org
*Corresponding author

Josephine Karam

Holy Family University,
Batroun, Lebanon
Email: jsphnkaram@gmail.com

Abstract: The number of cancer patients is increasing where oncology nurses must evolve in the treatment and modality of therapies. Nurses must play a crucial role in the management of cancer population to make sure that nurses working in this field are knowledgeable enough to work with cancer patients. Thus, the aim of this study is to evaluate the nurses' knowledge in multidisciplinary cancer care team and improve the nursing practices through education and conferences. Therefore, it is important to describe the nurses' attitudes and practices at Clemenceau Medical Center because nurses should guide and empower patients through their treatment journey by specifying the patients' needs and developing an individualised plan of care. Therefore, the analysis of the study has shown that nurses are unaware of the risks associated when assessment, education and counselling are insufficient. Nurses should believe that planning and education will improve the quality of life for patients.

Keywords: knowledge management; counselling; patient education; nurses' knowledge; multidisciplinary team; healthcare organisations.

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Biographical notes: Roy Matta is a Doctoral candidate and researcher at Toulouse Business School. He is also working as a Management Consultant at Mathew Glass and Architectural Design, a family-owned business which has been established in Connecticut, USA since 2006 and Professor teaching in many universities in Lebanon since 2008.

Josephine Karam was an MBA student at the Holy Family University, Batroun and currently working as Quality Coordinator at Clemenceau Medical Center, Beirut.

1 Introduction

The healthcare delivery is becoming a complex process pushed to reducing the sorrow of illness and increasing the overall health of people (Clipper, 2022). The prevention of cancer, diagnosis and treatment are a major challenge for society, it is a significant cause of morbidity and it is a leading cause of death worldwide. The number of cancer survivors is increasing as well as its risk with age. There are currently millions of people diagnosed and living with cancer and it is estimated that the numbers will be doubled by 2030. This rise is due to the improvements in treatments, incidence increases, and the ageing and growing population increases. The cancer journey is full of heterogeneous complications. It is aimless since it needs the participation of various multi-site professionals such as oncologists, surgeons and multiple specialty medical teams to intervene in the patient care (Joffe et al., 2022). Cancer care is undergoing an important paradigm shift from a disease-focused to a patient-centred approach. More attention is being paid to psychosocial aspects, quality of life, patient's rights and empowerment, as well as survivorship. Patients and families often experience physical, psychological, social, and existential distress associated with the disease or its treatment. However, the needs of these patients and their families may not be completely addressed or met by standard care. Therefore, patients should have access to high quality and effective healthcare in order to continue their journey safely. The healthcare system currently has a fragmentation in care and a lack of formal interdisciplinary collaborative process. Overburdened healthcare providers, especially nurses, are unable to prioritise time for collaboration and consensus with the interdisciplinary team. The evolution of these models also contributed to the evolving role of the nurse during cancer treatments and decision-making (Adeola et al., 2022). At Clemenceau Medical Center, the cancer patients have been admitted to a medical ward where nurses are trained in a competent way in order to administer chemotherapy. However, the number of cancer patients has increased significantly over the years that the hospital management has decided to dedicate a specialised unit to those patients. Patients often experience a sensitive situation where they become more anxious, impulsive and feel uncertain about their future. Once diagnosed with cancer, they have to deal with complex medical information and treatment decisions. Patients with cancer and their family members aim to receive the best care within a healthcare system that would provide them with safety and support as well as to focus on meeting their expectations (Jetelina et al., 2022). In collaboration with the nursing administration, the managers admitted the gap due to the young population of nurses at CMC and the lack of appropriate training in the field of hemato-oncology. In general, young population is task-oriented, whereas patients reported that they need confident nurses who can fill the role of care coordinator, someone they can talk to, a person who listens and more importantly to empower them through a well education about their conditions. The role of registered nurses needs to become more developed with specific skills in addition to special knowledge in cancer in order to provide a better management care of cancer patients for better patient outcomes. Understanding how to optimise the communication process by improving the nurses' knowledge with patients/family and the healthcare team is essential to decreasing the sorrow of cancer; while maintaining a continued collaboration between nurses, physicians, psychologists, and nutritionists will improve the patient-centred cancer care (Malik et al., 2022). The

aim of improving the nurses' knowledge in a multidisciplinary cancer care team is to promote better health, to help in healing and reducing suffering from the disease's treatment for patients' safety and life stability by listening, educating, empowering and caring. Because it is not the person's choice to be a patient, but it is a person's choice to be a nurse. Therefore, the aim of this study is to evaluate the nurses' knowledge with cancer patients from the moment it knocks their door throughout the whole journey. At the end, the study will answer the following research question: 'Are the registered nurses at Clemenceau Medical Center knowledgeable enough to take care of cancer patients, and to elaborate an individualised plan of care with a multidisciplinary team?' Finally, the study will be beneficial in having a clinical nurse specialist in hemato-oncology as a patient referral, in enriching the nurses' knowledge level at CMC through workshops in order to empower the patients' knowledge in managing their disease, its treatment and side effects as well as to prevent its complications in order to reduce the number of readmissions to the hospital (Walker et al., 2022).

2 Literature review

Knowledge is the sum of what is known and resides in the intelligence and the competence of people. It has been recognised as a factor of production and a factor in helping a company to grow economically. The development and utilisation of both individual and collective knowledge of an organisation and its members shall be an ongoing program for any new executive. There should be a way to disseminate knowledge among the staff and leaders in order to reach the desired target of an organisation. Knowledge assets and intellectual capital are the keys for competitiveness; they are considered the firm's number one asset as well as the raw materials of an organisation. Both have to be developed in parallel due to their similar goal. Such elements empower the employees to adapt to changes quickly and support the organisation to transfer theory into practice (Fischer et al., 2022). At the same time, the concept of knowledge management has been defined as the process of capturing, distributing and effectively using knowledge; it is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of the firm's information assets that may include database, policies, procedures and experience in individual workers. Knowledge management has spread rapidly and most of the organisations have realised the importance of the intranet to have a knowledge-based organisation. The advantage of having intranet in an institution is to connect across the organisation by sharing, managing information and knowledge (Venkatesh et al., 2022). People, process and technology are the three elements that embrace knowledge management. Each organisation shall be built according to these elements. Hence, technological infrastructure, recruitment, and the development of human resources are the central concept of continuous development within an organisation. In the daily operations of most companies whether in competitive sectors or non-for-profit sectors, the aforementioned knowledge takes place for better performance of employees. Hence, the job-related knowledge makes more sense with clients and increases their satisfaction better than the task-related ones (Edwards, 2022). Therefore, the renewal cycle of knowledge affects the human resources on a regular annual basis. The renewal process depends on internal and external circumstances. The internals include previous knowledge of employees and their recommendations, the organisational mission and

vision, and the learning profile; whereas the externals are about standards set by regulatory bodies such as, the International Organization for Standardization, Joint Commission International Accreditation, College of American Pathologists, and the Ministry of Health. Finally, a successful knowledge transfers and management depends on a map of knowledge gaps, which may serve as an explicit document that orients leaders (Alshammari et al., 2022). In order to facilitate the implementation of new processes, an intensive knowledge sharing is required in the training of new and old employees as well because the change is a risky and complex phase. Training and involvement of staff is crucial to enable the sustainability and maintainability of the process. Documentation is one of the main tools that help in the knowledge transfer during the analysis of a certain process. It facilitates the assimilation, diagnosis and the redesign of the process. All stakeholders shall collaborate in the process improvement. In order to match the changing requirements of the environment, the organisation must have a well-developed educational department to create new skills and learning approaches in order to separate the learning process from the members of the organisation. While it is a bit difficult and less effective to explain how experts continue to learn, it is also known that knowledge arises from the groups' interaction with different expertise and knowledge advances by learning from their weak ties. Furthermore, the choice between exploration and exploitation is one of the business strategies that help in balancing between the future and the present. Therefore, one effective way on how to increase innovation within an organisation is by the use of knowledge management (Acharya et al., 2022). In an organisational life cycle, new people join, some resign and others retire. Therefore, knowledge retention is a crucial procedure to speed up the learning curve of the new employees. The need of learning should be addressed by a strategic initiative plan that is put by the organisation such as cross-training, job rotation, and job shadowing. The three components of knowledge management are a part of its life cycle. The people performance is improved by working on culture, networking, training and education as well as on the retiree management. The process performance depends on the communities of practice by sharing ideas, lessons learned and work practices. Technology also plays a crucial role in order to improve the performance of the employees in knowledge management through web-based technologies, and the use of intranet (Jevnaker and Olaisen, 2022). Knowledge management has an impact on business objectives and financial savings; it improves customer's satisfaction as well as the sense of belonging by increasing the recognition of the employees who showed an improved performance throughout the year. Also, it enhances the decision making and accelerates the transfer of existing know how for increasing learning. Sharing knowledge helps people to be more creative and innovative and helps senior leaders to gain competitive advantage in their organisations. Therefore, the factor of the critical success is to achieve the mission and goals of the organisation. The best way of accomplishing the knowledge transfer is through e-learning as well as other educational approaches through learner-centred, community access, online forums, Moodle and blackboard. Such educational technologies help in lectures to be more interactive and collaborative as well as in increasing the number of participation. As a result, the employees will feel comfortable and familiar with technology. Therefore, during the career paths it is very important to specify the needs of education and attend to what is obviously useful. It is very crucial that the training and educational sessions be very comprehensive, well

developed and successful in order to affect all the members of the organisation (Ferreira et al., 2022). On the other side, nursing is the profession or practice of providing care for people who are physically or mentally ill. It embraces the promotion of health and prevention of illness as well as the collaborative care of all families, groups and communities. Knowledge is the science of nursing while caring is the art of nursing. Because nurses care, it is about to decomplexify the knowledge of nurses for better interpersonal and relational work with patients. Nurses should possess knowledge and a high level of competency at work as well as at the technical level to meet the patients' needs and expectations. Both knowledge and nursing care are important for a better quality of work in nursing. This practice is handled by a registered nurse, a person, who has accomplished a specialised program of generalised nursing that allow her or him to practice nursing in his/her country according to its law. Education, advocacy, and the promotion of a safe environment are the nurses' essential key for a shining mission (Crider, 2022). Nursing is well defined as the protection, promotion, and optimisation of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations (Godfrey, 2022). Knowledge and caring are two essential components to providing effective, safe, and high quality care. Knowledge is about information, and caring is about nurses' behaviour, compassion and respect. These are the guidelines in nursing, but its real meaning goes far beyond the basic knowledge, it should be tailored for each patient in a way of turning the science into art; the art of caring. Moreover, the efficient nurse is the person who knows how to turn theory into practice by using the critical thinking as well as applying knowledge and evidence-based practice in addition to caring. Smart nurses use the knowledge in participation with the patient by discussing his plan of care after assessing, planning, implementing and evaluating the care provided. The essential points that each nurse stresses on with are about the promotion of health and wellness in addition to safety, care coordination, physical, emotional, spiritual comfort and pain. Last but not least, the bio-psychosocial and the special needs such as linguistic, cultural and health literacy, are taking an important part of the patient's plan of care (Moscato et al., 2022). Therefore, we may identify that the healthcare delivery system depends on knowledge and critical thinking for patients' safety and excellence in caring. That is why the nurses shall be knowledgeable workers. Knowledge management in nursing includes two types of work which are the routine work such as vital signs and administering medications, and the non-routine work such as expectations and judgments (Justin et al., 2022). Nowadays, organisations and knowledgeable workers have admitted that change cannot be avoided; this is the best opportunity for learning and improvement. Nurses' work is based on knowledge for both routine and non-routine work without ignoring the characteristics of a knowledgeable worker. The traditional role of a nurse used to be the executer of orders but the knowledgeable worker nurse depends on evidence-based practice as well as concentrates on analysing, acquiring and synthesising without forgetting the competencies, skills, and dexterity. The patients and physicians evaluate the nurses for what they know and how the knowledge was used by nurses to meet patient's care for better outcomes (Fadhillah et al., 2021). Nursing performance is very essential and crucial in the nurses' career because it reflects positively on the health service delivery, patients' outcome, and organisational performance. Nursing performance is related to the

knowledge, experience and confidence that a registered nurse own. Many studies revealed that knowledge and skills are highly appreciated by patients because they make them feel safe and secure. Patient's trust is a top priority for hospitals which is the most value in the nurse-patient relationship. It is obtained from the professional knowledge that a nurse owns in building this trust. Once it is established, patients feel more confident, safe and secure (Kim and Shin, 2022). Therefore, the nurses have to develop their knowledge with time and enrich the care given to patients by new skills and studies in order to be called expert nurses. Nowadays, technology is dominating all institutions and nurses have to learn with it and not against it. Also, nurses must use it wisely to ensure that the focus of nursing on patient care is not lost. A smart nurse has to know how to build a good relationship between knowledge, skills and judgment in order to help patients in symptoms relief as well as in supporting hope and coping. This intellectual combination helps the patients physically and psychologically. Never the less, technical care remains a safeguard that must be in place to protect patients (Uwayezu et al., 2022). Whereas, the new model of care is a patient-centred care that means nurses are not working alone, but there is a team who is coordinating patients' information, communicating and educating patients about the way of addressing pain, making decisions, management and how to prevent diseases, promote health and wellness. This team is called interdisciplinary team which cooperates, collaborates, communicates and integrates care in teams to ensure the continuity and reliability of care that has been provided. Patients with cancer face a lot of obstacles physically and many other side effects from treatment modalities. Cancer treatment is a long journey for patients that start from the moment of diagnosis and beyond. Because cancer affects the patient socially and psychologically, his journey should be shared with healthcare professionals' especially nurses who can provide care and support (Fenton et al., 2022). As mentioned before, modern healthcare is shifting towards patient-centred care which is established to discuss patients' values and needs by involving the patient and let him participate actively in his plan of care. The concept of sharing the patient's journey with healthcare givers mainly nurses helps them to understand the fundamental needs of the patients in order to make their lives as normal and productive. The relationship between nurses and patients is not anymore about technical skills; it is a partnership where both will work together on decisions about their daily life and care. But despite the significant role of a nurse, she/he is still far from the patient due to the complexity of healthcare system in hospitals that increases more the distance between the patient and the nurse. However, the role of oncology nurse is still unseen. More weight has been assigned to diagnosis and treatment where the psychosocial part is almost forgotten (Hendren et al., 2022). Patient counselling and psychosocial support became accreditation requirements in order to enhance the patient's life during his long journey of treatment. People with cancer and their care givers have psychological stress which might be decreased by the effective communication between healthcare givers that support their needs. Many researchers have shown that experience support the skills of communication for healthcare givers. Since effective communication is playing an important role with patients suffering from cancer, this means that the nurse and other healthcare givers have to acquire the art of communication with patients according to his/her status and needs. Cancer has become a topic for discussion in the media, and people are talking freely about it and about its consequences. However, it is still for some people a life crisis that has a lot of impact on

patient's life, and their information will vary during their dramatic journey. This variation in information will affect the continuity of patients' education and empowerment as well which will make the patients feel that this information is irrelevant and unreliable (Immonen et al., 2022). In order to face such difficulties, an individualised plan of care should be elaborated for each patient by allowing themselves to participate actively in their plan of care and in the decision making process. On the other side, counselling is not a therapy; it is a type of analysis of the patient's cognitive level, expectations and mood. Therefore, analysis is important in order to tailor an individualised plan of care for the patients and encourage patient's counselling. Patients are disempowered due to cognitive challenges secondary to age, illness or treatments. It is not applicable that all cancer patients meet the criteria for cognitive impairment, but they might face sudden deterioration that may impact their daily operations of living and their quality of life. On the other hand, patient's empowerment is an active process that helps in the decision making. Such type of empowerment is a result of patient-nurse relationship due to several activities like communication and collaboration in nursing care (Rodriguez et al., 2021). There is a huge number of people living with cancer having one or more physical or psychosocial consequences from the disease and its treatment that affects their lives on a long-term basis. Therefore, the national health policy has recognised the need for an action plan to improve the outcomes for people being affected by the side effects of the disease and its treatment. Evidence shows that many cancer survivors have their needs unmet. The delivery of high quality services in cancer is the nurses' role where they play an important role in patients' education through their treatments in order to maintain a healthy life style and promote screening for early detection and counsel patients. The importance of nurses' knowledge in cancer is to identify the patient's needs and expectations. Hence, the nurses' role is to know how to plan, manage, organise and deliver a high quality of care which may help in controlling the side effects of the disease and implementing treatments in a well specified setting, ensuring that the patient has received all the needed information for a better outcome (Matthews and Wang, 2022). Since the cancer incidents are increasing, then there will be an increasing need for sharing expertise knowledge and spreading education whether clinical education or services education. Nurses have to gather enough knowledge and learn from best practices in order to push for changing in the nursing care for cancer patients and making a difference in patients' life. The best practice to support patients with cancer should include three elements: skills, knowledge and confidence in nurses in order to help people with long consequences of the disease itself, its treatment and its side effects. They should acquire new skills, and get the most innovative tools and information for managing cancer. However, the knowledgeable nurse with proper skills and competencies will help in building confidence and patient-nurse relationship. This relationship will facilitate the cancer victim to continue his life with dignity, stability and live with ease and not with disease (Balneaves and Watling, 2022). Nursing care and support have a positive outcome on cancer survivors by improving their quality of life. Isolated nursing care is not enough with people having cancer; a multidisciplinary team (MDT) approach is required and needed. Many nurses possess the technical skills needed to work with cancer patients; nevertheless, the psychosocial support and education empowerment are not met yet. However, the late treatment side effects may occur at any time after receiving the cycle of therapy where the need of clinical oncology pharmacist is highly recommended in order to educate the nurses about the medication and its consequences on the short and long-term in addition to the drug-drug interaction,

drug-food interaction or even to report any adverse drug event. Patients have a vast range of individual needs especially on the long run which might affect them psychosocially where the need of psychologist is highly effective in the treatment of patients with cancer in addition to the primary physician (Musgrave et al., 2022). The role of a clinical nurse specialist is very important in the patient's life journey from the moment of diagnosis till he/she reaches the recovery phase. The CNS has to treat and manage the patient's concerns as well as to promote health and well-being. They work autonomously and turn the knowledge of cancer and treatment into assessment. A CNS is an essential element of the MDT which coordinates the patient care and manages his concerns whether he is in or outside the hospital. Also, he/she works as a resource staff for nurses in order to educate and guide them. Also, a CNS has a role to help patients quickly identifying the emergency issues that might need medical attention and helps in enhancing the recovery post treatment or surgery by educating the patient how to manage his recovery at home in order to decrease the length of stay in the hospital. The role of CNS is very important, but no one can achieve goals alone. Therefore, working together in a MDT may reach more intelligent solutions than an individual working alone (Henbrey, 2021). MDT meetings have been approved by the Department of Health as the main centre for managing chronic diseases. The aim of MDT is to promote the patient's role in his own care. Many healthcare givers believe that MDT meetings ensure high quality care and improve outcomes. A multidisciplinary approach is an interdisciplinary process that is the result of care fragmentation. For example, a patient who is admitted to a hospital and slept over for a couple of nights, he might be seen by multiple physicians with different specialties, nurses and many other staff who is responsible for his care during a single short stay. Such multiple healthcare providers might not be able to prioritise time for collaboration. The World Health Organization admitted and agreed that the interdisciplinary collaboration is very essential in order to ensure the success of primary healthcare (Petrella et al., 2021). Collaboration is the act of working jointly; nurses and physicians worked and shared responsibilities together in order to solve problems and initiate a plan of care for patients in intensive care settings. Interdisciplinary collaboration has shown to improve the quality of patients' care as well as safety. Also, many adverse healthcare outcomes have been prevented. The various elements leading to a successful interdisciplinary collaboration are about an environment of trust, effective communication, and the acceptance of each other's' role, skills, and responsibilities of MDT. However, the cultural norms of patients and family must not be ignored (Wu et al., 2022). To have a successful interdisciplinary collaboration, a dynamic process should be created to address the willingness to collaborate as well as to show the respect and trust for all members of MDT, and possess personal communication skills according to the mission, values and management structure of the organisation. No doubt that all members of MDT are playing an important role in patients' care but still the person who redesigns the environment to pass the bridge from fragmented care to integrated multidisciplinary care is the nurse, as she/he is the front lines and the most connected person to the patient and the healthcare givers. The leadership responsibility is to guide the processes that facilitate the implementation of interdisciplinary collaboration. The clinical MDT has an important role to make a difference and drive the change at the bedside for better outcomes where most decisions are taken about the patients' care. The role of MDT is patient-focused and not disease-focused using an evidence-based practice and at the same time maintaining the respect of their peers. Finally, communication among the medical

team has improved the professional development of its members. It has provided for an educational opportunity for the novice staff and clinicians (Farzi et al., 2022). Nursing theories are helping to guide and define the nursing care, and provide a foundation for clinical decision-making. As the field of nursing is continuing to grow, theories are the keys essential in structuring patients' care such as providing nurses with the rationale in making healthcare decisions, guiding evidence-based research, which then leads to best practices and policies, helping nurses to evaluate patients' care, giving nurses a better understanding of their purpose and role in a healthcare setting, ensuring that nursing best practices are being used, providing an identity to nurses that differentiates the nursing practice from the medical one, and helping patients and other healthcare professionals to recognise the contribution that nurses are handling (Helou et al., 2022). Although some nursing theories have been around for hundreds of years in public health, many are still being used in today's hospitals and healthcare settings. One of the important theories that had supported our study is the patient-centred approach to nursing theory which was created by Faye Abdellah in the 1940s. This theory will help with nursing education and it is intended to guide care in hospitals. It may also help in identifying a patients' problem and expands into additional skills to develop a treatment. The theory will help the patients to always be in a complete control when it comes to making decisions about their own care and treatment. Clinicians are there to inform, advise and support, but it is ultimately up to the patients to determine what course of action they will take. Therefore, a patient needs to fully understand the procedures and treatments they will undergo, and clinicians must aim to make them as knowledgeable and comfortable as possible, especially when treating them for a complicated or painful illness or injury (Kmetec et al., 2022). From another side, we can say that it involves caring for patients beyond their conditions and tailoring the service in order to suit their individual wants and needs. It is about respecting that they have their own views on what is best for them, and have their own values and priorities in life. To do this, we need to get to know more about the patients in person and actively involve them in care-related decisions. No one appreciates having the decisions made for them without their input. It makes them feel like a task, rather than a human being with thoughts and feelings. Doing so enables the patients to retain their dignity and autonomy during a challenging time. Rather than leaving them feeling hindered by their ailment or disability, during their time as an inpatient, we will be helping them in living a fulfilling life (Andersson et al., 2022). This will help the patients to improve their independence, feel more comfortable and confident in the service being offered through which we can meet their emotional, social, and practical needs in order to ensure that they are maintaining a high quality of life. We can also support those who may not be able to directly communicate their wants and needs. At the same time, it will also help the healthcare organisations for example the patients will be more likely to stick to treatment plans and take their medicine if they feel respected, involved, and under control. It can improve the patients' understanding of their conditions especially when there is a need for emergency services, motivate them to adopt positive health behaviours' that improve and help them to manage their own health, and then everyone will feel happier and more positive (Gibson et al., 2022).

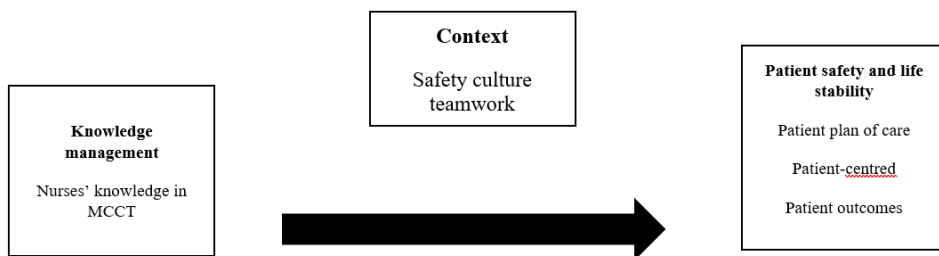
3 Research context

Previous researches have showed that the current models of care do not meet the needs of all patients living with cancer and obliged people working in the field to improve the care and support for cancer patients in order to facilitate their journey (Gafer et al., 2022). Whereas, a systemic review of literature, and for the purpose of identifying studies on multidisciplinary care in cancer patients, showed that the discussion of cases within MDTs has improved the planning of therapy, adherence to recommended preoperative assessment, pain control, and adherence to medications (Hamadeh et al., 2022). From the other side, evidence has suggested that collaboration is improving the cancer care delivery and outcomes; adding to that through the collective efforts, the pharmacovigilance is also playing a vital role in the process of patient safety (Abdulrasool, 2022). Previous Studies have also indicated that the focus on the development of cancer nursing roles reflects successful developments in oncology nursing and maximises the potential role that nurses can play in all aspects of cancer care while others studies have shown that there is a growing recognition that an interdisciplinary approach to cancer prevention and control should include patient-centred communication. It improves the communication, exchange of information, expertise and collaboration in order to maintain patient safety that is the top priority of patient care leading to better and multiple benefits due to the rising stage of individualised medicine (Khalil et al., 2022). Finally, prior studies have shown that the MDT and care have been considered to be the best approach to cancer. Many have focused on the collaboration of all medical team and healthcare professionals and have also agreed that cancer care is guided by the willingness of the team to make clinical decisions based on evidence-based practices and coordinate the delivery of care at all levels, mainly at the patient's level, by encouraging him/her to play an active role in their plan of care and in the decision making process. The MDT approach has been proven to be beneficial for patients; it has improved the clinical outcomes, decreased the hospitalisation length of stay and the number of readmissions (Jazieh et al., 2022). In order to analyse the problem, the following two hypotheses were defined:

Hypothesis 1 The role of nurses' knowledge in the multidisciplinary cancer care team for better patient plan of care.

Hypothesis 2 The impact of nurses' knowledge on patients' approach for patients' safety and better life stability.

Figure 1 Conceptual framework of the nurses' knowledge in MCCT



4 Research methodology

Starting with the education given by the registered nurses which is not enough and clear to the patients and their care givers. The patients' complaints already reported to the quality department have also showed that patients are not satisfied with the education provided by the nurses and even by their approaches during their stay in the hospital. For this reason, the purpose of the study is to know the different factors that will make the patients' journey easier and smoothly through the nurses' knowledge with cancer patients and in the multidisciplinary cancer care team. Therefore, looking for better performance will improve patients' satisfaction and improve their quality of life as well (Lutz et al., 2022). Both qualitative and quantitative methodological approaches were applied. Qualitative data was received through interviewing patients diagnosed with cancer in order to generate participant perspectives about ideas, opinions, and experiences as well as on activities and behaviours; whereas quantitative data was collected through questionnaire surveys with registered nurses, dieticians, pharmacists, and physicians working at Clemenceau Medical Center. As mentioned earlier, nurses are the assets of each hospital that is why improving the nurses' knowledge in cancer will facilitate the patients' journey with cancer and empower their knowledge in managing the treatment's side effects at home. For this reason, a study about nurses' knowledge in this disease was conducted for better performance to both nurses and patients. The questionnaire used in this study is divided into three sections. The first section gathers information about the profile of respondents. The second section is related to the respondents working at CMC. The third section of the questionnaire measures the extent to which nurses' knowledge are being practiced in this selected organisation for patients living with cancer. The research study utilised is the cross-sectional research design in an effort to examine the nurses' knowledge and practices with patients diagnosed with cancer. Cross-sectional research involves using different groups of people who differ in the variable of interest but share other characteristics, such as socioeconomic status, educational background, and ethnicity (Alosaimi et al., 2022). The target population for this study was the nurses, dieticians, pharmacists and physicians as well as the patients. The target population for this study was 50 RNs, 8 clinical pharmacists, 5 dieticians, 7 physicians and 130 patients. Clemenceau Medical Center has about 800 employees where 252 of them are nurses between registered nurses and nurse aids (50 of them are RNs who deal with cancer patients), 150 of the 800 employees are paramedical staff, 240 are physicians while the others are administrative and other services. The independent variable is consisting of the important role of nurses' knowledge in the multidisciplinary cancer care team through training and nurses' development, counselling, knowledge transfers and sharing; whereas the dependent variable is about patient safety and life stability through patients' assessment, improving the patient's plan of care, patients' centred approach, patients' feedback and patients' complaints as well. The survey design consisted of closed-ended questions, also on Likert scale closed-ended multiple choice questions. A stratified random sampling technique was used in this study trying to evaluate data from different subgroups. A total of 200 questionnaires were distributed, 130 of them were for patients, and the others were for nurses and healthcare givers. The researchers have distributed 200 questionnaires to the selected sample and collected the filled questionnaires from the respondents. Among the 200 distributed, 172 questionnaires were collected and used for an analysis purpose. Questionnaires were coded and data were entered into SPSS program in order to perform the required calculations. Frequency distribution was used in

order to describe the profile of the sample. After the gathering of data into a frequency distribution, it was also presented in a chart form since it is easier for most people to comprehend the meaning of data presented graphically rather than presented numerically in tables or frequency distributions.

5 Analysis and results

5.1 Analysis and results of the interviews

After interviewing patients diagnosed with sigmoid and breast cancer, we have obtained the following results.

5.1.1 Analysis and result of the first interview

After interviewing patients diagnosed with sigmoid cancer, we have found that at the beginning, they knew that there were some polyps to be removed by surgical intervention and required hospitalisation for couple of days. After the operation, they had some complications regarding the treatment of a pulmonary embolism. At this stage, the physician will be playing a crucial role in explaining to the patients why a pulmonary embolism was developed. It is also very essential to schedule appointments with specialists in order to be followed. They should receive chemotherapy according to the oncologists and the surgeons whom they trust, that is why they have chosen CMC because of their qualified physicians but they did not have any idea about the nurses concerning their technical work and their level of knowledge. During their stay in the hospital, they have recognised that not all the nurses are knowledgeable and technically competent especially that some of the patients have an ileostomy bag that needs special care and techniques. The nurses' assessment was based on appetite, nausea and vomiting, defecation, and pain. Hence, in order to feel more secure, they asked the nurse manager to assign the competent nurses that they felt comfortable with them. During the days of hospitalisation, they have recognised that knowledge varies from one nurse to another and not every nurse is providing the same way of education. The most things that have also bothered the patients were the lack of communication with their physician regarding the decisions to be taken. They used to receive all the information from the nurse whom they respect but it is their right to know such information directly from the physicians. Moreover, they felt insecure when they were facing a problem at home where they could not reach the oncologists who were always busy and usually diverts all their calls to the secretary. Another limitation already faced by the patients was the expensive treatments they have supposed to take at home in addition to the cash payments of some uncovered investigations especially for the patients who are not fully insured, taking into consideration the economic crisis and the hyperinflation occurring nowadays in Lebanon. Therefore, they have highly recommended to assign special persons to coordinate the patients care with the main attending physicians and other healthcare givers, because the sick patients will not be ready to see many faces and repeat the same information for several times.

5.1.2 Analysis and result of the second interview

After interviewing patients diagnosed with breast cancer, we have found that they underwent the surgery in a hospital other than CMC and received the chemotherapy at the mentioned hospital. The doctors were very clear with them, they informed them about the breast cancer that was curable and they referred them to the oncologist who in their turn has explained to them the process and some side effects of the treatment. At the beginning, they felt so anxious and thought about how they would look without hair. The nurses used to be very nice and welcoming but never gave them the necessary education or even directed them on what to do in case of emergency; they used to call their doctors immediately. Also, their assessment was very brief asking only about the time after the treatment at home and their feeling on the day of treatment. Moreover, they used to prepare all their questions in order to address them to the physicians, the ones who know how to answer all their concerns. After the fifth session, they became very weak and could not walk, they lost the joy of going out with friends and even they also lost the sex-drive. Unfortunately, no one told them about these complications ahead of time and they never knew that they are reversible. When they have addressed the problems to their doctors, they were so cool and admitted that those are the side effects of the treatment. At this moment, the patients were not satisfied at all wondering why they did not inform them ahead of time so at least, they can avoid the stressful life and prevent such side effects. They were also complaining about the very expensive treatments where not all the patients are financially capable to be treated especially in this very tough period of time which may affect their safety and life stability. Finally, further recommendations were to create a support group of patients who are cancer survivors in order to help and encourage the newly diagnosed persons. Moreover, they would also suggest having an education centre where they can find pamphlet, references and group of persons that can provide more awareness and support from their previous experience along with specialised healthcare givers.

5.2 Analysis and results of the questionnaires

We may find below some of the results obtained from the questionnaires being launched to the registered nurses, the healthcare givers and the patients.

5.2.1 Analysis and results of the questionnaire with the registered nurses

As shown in the results of the multivariate regression for correlations between respecting the MDR and members believing in its effectiveness on patient safety, Table 1 indicates that these members believe that the MDR is very often effective for patient safety, while other members believe that they are only 'often' effective, and hence it is 19 times more likely for the MDT to 'rarely' respect the round. This can show that members' belief in the MDR's effectiveness on patient safety is correlated with their respect for the round.

Table 1 Multivariate regression for MDT respect the round

		<i>B</i>	<i>P-value</i>
Rare	Intercept	.154	.782
	Members of the multidisciplinary team often believe that the MDR is effective for patient safety	19.484	.000

As shown in Table 2, there is a significant difference in the distribution of nursing education in comparison with the frequency of dealing with cancer patients such that 89% of nurses very often dealing with cancer patients are rarely participating in hemato-oncolgy workshops and conferences, and 75% of nurses who are not dealing with cancer patients never participate in hemato-oncolgy educational conferences/courses or workshops. Despite the fact, 100% of the nurses have indicated that CMC has a program for staff education and training.

Table 2 Nursing education

		<i>Participate in conferences, courses, and workshops concerning the Hemato-oncology</i>			<i>Total</i>	
		<i>Never</i>	<i>Rare</i>	<i>Often</i>		
How often do you deal with cancer patients	Never	Count	3	1	0	4
		% within how often do you deal with cancer patients	75.0%	25.0%	.0%	100.0%
	Often	Count	0	8	1	9
		% within how often do you deal with cancer patients	.0%	88.9%	11.1%	100.0%
	Very often	Count	0	33	4	37
		% within how often do you deal with cancer patients	.0%	89.2%	10.8%	100.0%
Total	Count	3	42	5	50	
	% within how often do you deal with cancer patients	6.0%	84.0%	10.0%	100.0%	

Note: Chi square test = 0.000.

5.2.2 Analysis and results of the questionnaire with the healthcare givers

Table 3 shows that there is a significant difference (two-sided chi-square test < 0.05) in views on HCGs regarding the nurses' importance in MDRs such that mostly physicians (~86%) view nurses as very important in MDR followed by the dieticians (80%). HCGs agreed that the nurses' role in the multidisciplinary round is very important if she/he conveys an accurate patient's assessment and needs because nurses are the front liners and spend more time than physicians and any other HCG.

Table 4 shows that there is also a significant difference in HCG's reliance on nurses' input and knowledge in cancer such as only dieticians indicated that they very often rely on nurses' input and knowledge in cancer (40%) while the majority of all three HCGs indicated that they rarely rely on nurses' input and knowledge in cancer. Dieticians rely on nurses' input because all what they need to know is the patient's height and weight in addition to his appetite and preferences in meals. Whereas, the pharmacists and physicians prefer to assess the patients by themselves because the nurses highlight on couple of elements as shown in Table 4 and do not address the holistic needs of the patient.

HCGs mostly viewed nurses' assessment as satisfactory regarding the assessment of nausea and vomiting (60% satisfied), assessment of appetite and food intake (65% satisfied), assessment of diarrhoea or constipation (55% very satisfied), fever

(60% very satisfied), cough (55% satisfied) and assessment of pain (70% very satisfied). We can conclude from Table 5 that the nurses did not address the holistic assessment of patients such as skin impairment, mobility, bladder disorders, sexual difficulties, coping and alopecia. All of this, in addition to the patients' education for symptoms' management, side effects of the treatment, and patients' education for emergency and home care resources.

Table 3 HCG's views on importance of RNs in multidisciplinary rounds (MDR)

		<i>HCG's view on importance of the RNs in MDR</i>			<i>Total</i>
		<i>Important</i>	<i>Very important</i>		
Specialty	Pharmacist	Count	7	1	8
		% within specialty	87.5%	12.5%	100.0%
	Dietician	Count	1	4	5
		% within specialty	20.0%	80.0%	100.0%
	Physician	Count	1	6	7
		% within specialty	14.3%	85.7%	100.0%
Total		Count	9	11	20
		% within specialty	45.0%	55.0%	100.0%

Note: Chi-square test (two-sided) = 0.008.

Table 4 HCG's rely on RN's input and knowledge in cancer

		<i>HCG's rely on RN's input and knowledge in cancer</i>			<i>Total</i>	
		<i>Rare</i>	<i>Often</i>	<i>Very often</i>		
Specialty	Pharmacist	Count	6	2	0	8
		% within specialty	75.0%	25.0%	.0%	100.0%
	Dietician	Count	0	3	2	5
		% within specialty	.0%	60.0%	40.0%	100.0%
	Physician	Count	4	3	0	7
		% within specialty	57.1%	42.9%	.0%	100.0%
Total		Count	10	8	2	20
		% within specialty	50.0%	40.0%	10.0%	100.0%

Note: Chi-square test (two-sided) = 0.032.

5.2.3 Analysis and results of the questionnaire with the patients

The multivariate regression was conducted to study the correlation between the patient's evaluation of knowledge on managing disease and the treatment side effects with the availability of a dedicated space to meet the MDT and the availability of educational materials prior to treatment. The results have showed that not having a dedicated space to meet the MDT and without providing patients with the educational materials prior to treatment are significantly correlated with poor patients' knowledge on disease and side effects.

Table 5 Nurses assessment of patients as viewed by HCGs

	<i>Very dissatisfied</i>	<i>Dissatisfied</i>	<i>Neutral</i>	<i>Satisfied</i>	<i>Highly satisfied</i>
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Assess the patient's performance between two sessions of treatment	6 (0.3%)	1 (5%)	7 (35%)	6 (30%)	0 (0%)
Assess for the severity of insomnia	2 (0.1%)	10 (50%)	0 (0%)	7 (35%)	1 (5%)
Assess for the severity of nausea and vomiting	0 (0%)	0 (0%)	0 (0%)	12 (60%)	8(40%)
Assess for the severity of mouth ulcer and mucositis	0 (0%)	3 (15%)	0 (0%)	8(40%)	9 (45%)
Assess for the severity of appetite and food intake	0 (0%)	0 (0%)	1 (5%)	13 (65%)	6 (30%)
Assess for the severity of anxiety	0 (0%)	5 (25%)	4 (20%)	9 (45%)	2 (1%)
Assess for the severity of diarrhoea or constipation	0 (0%)	1 (5%)	0 (0%)	8(40%)	11 (55%)
Assess for fever	0 (0%)	0 (0%)	0 (0%)	8(40%)	12 (60%)
Assess for cough	0 (0%)	0 (0%)	2 (10%)	11 (55%)	7 (35%)
Assess for the alopecia	13 (72%)	1 (5.6%)	3 (17%)	1 (5.6%)	0 (0%)
Assess for the sexual difficulties	16 (89%)	1 (5.6%)	1 (5.6%)	0 (0%)	0 (0%)
Assess for skin impairment	1 (5%)	10 (50%)	5	3 (15%)	1 (5%)
Assess for bladder disorders	0 (0%)	9	2 (10%)	8(40%)	1 (5%)
Assess for the severity of pain	0 (0%)	0 (0%)	2 (10%)	4 (20%)	14 (70%)
Assess for the mobility	0 (0%)	5 (25%)	6 (30%)	3 (15%)	6 (30%)
Assess for the severity of vein insertion or polysite insertion difficulties	2 (0.1%)	0 (0%)	0 (0%)	8(40%)	10 (50%)
Assess for the patient education for symptom management	2 (0.1%)	1 (5%)	9 (45%)	8(40%)	0 (0%)
Assess for the patient treatment side effects	2 (0.1%)	2 (10%)	6 (30%)	10 (50%)	0 (0%)
Assess for the patient education for emergency	4 (0.2%)	9 (45%)	4 (20%)	3 (15%)	0 (0%)
Assess for the patient education homecare resources	4 (0.2%)	9 (45%)	3 (15%)	4 (20%)	0 (0%)
Assess for the patient education for coping	4 (0.2%)	8(40%)	3 (15%)	5 (25%)	0 (0%)
Assess for the patient concerns (complains, problems, appliance...)	0 (0%)	1 (5%)	18 (90%)	1 (5%)	0 (0%)

Table 6 Multivariate regression for patients' knowledge on disease and side effects

	<i>B</i>	<i>P-value</i>
Poor	2.580	.000
Dedicated place to meet with physician and the MDT		
Educational materials and educational information prior to initial treatment		
Good	1.482	.003
Dedicated place to meet with physician and the MDT		
Educational materials and educational information prior to initial treatment		
Very good	.588	.292
Dedicated place to meet with physician and the MDT		
Educational materials and educational information prior to initial treatment		

As per the multivariate logistic regression conducted to study the variables correlated with patients' views on the positive influence of nurses, three co-variables were studied and showed that nurses' participation in the plan of care is significantly correlated with having a positive influence on patients. In detail, when the nurse participates in the plan of care, it is 4 times less likely for them to view the nurse as rarely providing positive influence (p -value = 0.000) while it is 3.9, less likely for patients to respond that the nurse often provides positive influence when compared to very often providing responses if the nurse participates in the care plan. Thereby, the nurses' participation in the patients care plan significantly improves the patients' feeling of positive influence by the nurse, adding to that there is no designated space to meet the physician and MDT, no designated nurse position, and no educational materials were provided to them before the initiation of their treatment.

Table 7 Multivariate regression for patients' responses on positive influence by nurses

	<i>B</i>	<i>P-value</i>
Never	.498	.933
Patient met the nursing team caring for him before treatment	100.809	.
Frequency of RN participation in multidisciplinary team	1.618	.738
RN participation in plan of care	-3.932	.354
Rarely	6.051	.235
Patient met the nursing team caring for him before treatment	-2.894	.
Frequency of RN participation in multidisciplinary team	1.101	.432
RN participation in plan of care	-4.072	.000
Often	4.918	.110
Patient met the nursing team caring for him before treatment	-1.659	.
Frequency of RN participation in multidisciplinary team	2.148	.121
RN participation in plan of care	-3.956	.000

According to the results tabulated, we can conclude that patients were mostly satisfied with the nurses checking on severity of nausea and vomiting, mouth ulcer and mucositis, fever, cough, pain, vein insertion or polysite insertion and their concerns which are compatible with the feedback received by HCGs.

Table 8 Patients' satisfaction with nurses checking on the following

	<i>Very dissatisfied</i>	<i>Dissatisfied</i>	<i>Neutral</i>	<i>Satisfied</i>	<i>Highly satisfied</i>
Patient's performance and well-being between treatment sessions	0%	3.90%	59.80%	36.30%	0%
Severity of insomnia	7.80%	52%	33.30%	6.90%	0%
Severity of fatigue	12.70%	50%	29.40%	7.80%	0%
Severity of nausea and vomiting	0%	1%	5.90%	69.60%	23.50%
Severity of mouth ulcer and mucositis	0%	1%	5.90%	70.60%	22.50%
Severity of appetite and food intake	0%	2%	18.60%	63.70%	15.70%
Severity of anxiety	18.60%	44.10%	34.30%	2.90%	0%
Severity of diarrhoea or constipation	0%	1%	10.80%	75.50%	12.70%
Fever	0%	1%	6.90%	78.40%	13.70%
Cough	0%	1%	9.80%	76.50%	12.70%
Alopecia	32.40%	48%	19.60%	0%	0%
Sexual difficulties	91.20%	7.80%	1%	0%	0%
Skin impairment	20.60%	65.70%	8.80%	4.90%	0%
Bladder disorders	13.70%	71.60%	10.80%	3.90%	0%
Severity of pain	0%	1%	2.90%	45.10%	50%
Mobility	8.80%	62.70%	24.50%	3.90%	0%
Severity of vein insertion or polysite insertion difficulties	0%	1%	0%	41.20%	57.80%
Patient education for symptom management	3.90%	53.90%	38.20%	3.90%	0%
Treatment side effects	1%	63.70%	35.30%	0%	0%
Patient education for emergency	3.90%	81.40%	14.70%	0%	0%
Patient education homecare resources	1%	29.40%	59.80%	9.80%	0%
Patient education for coping	1%	32.40%	65.70%	1%	0%
Patient concerns (complains, problems, appliance...)	0%	0%	0%	77.50%	22.50%

6 Limitation of the study

The only limitation was the small sample selected for this study, we hope in further studies to look at a larger sample so the results will be more generalised and extrapolated to other contexts.

7 Conclusions

Long time ago, and even now when a person is diagnosed with cancer, he and his family think about the end and will start living the sorrow before it starts. Nowadays with the advanced medicine and treatments, cancer is almost a curable disease if it is early detected. Therefore, prevention is very important not only in cancer but in all diseases. People with cancer will have many worries; their body image, their cognitive level, their work, and their family relation. Cancer can affect everything in a person's life (Adynski et al., 2022). The study has proved the importance of nurses' knowledge in the multidisciplinary cancer care team and showed that the multidisciplinary round is very essential for patients' safety in order to improve their care for better outcomes. It has been also noticed that nurses agreed on the importance of the multidisciplinary round. However, they have been disappointed from the attitude of the MDT who rarely respected the assigned time of the multidisciplinary round and each other's as well. And as it has shown in the study that healthcare providers, mainly the nurses are playing a crucial role in the patients' outcomes as well as the patient himself is also playing an important role. Patients who are well informed about their cases are more likely to have better life stability during the journey of their treatments. They might use money, due to the high costs of cancer treatments, social workers and psychologists especially if they have children. They need the help of experts to take back control. That is why the patients should not face cancer alone. Moreover, the study highlighted on the nurses' role in management and education as well as it showed the importance of having a clinical nurse specialist to back up the novice nurses, facilitate their daily operations and meet the patients' needs and expectations. Therefore, it was shown that the MDT is becoming a necessity and has an important role in the cancer victim's life, mainly the nurses who are spending more time with the patients. Having an informed patient helps to build a bridge of trust and transparent relationships with the healthcare providers for better outcomes. The cancer patients should receive the highest healthcare from the hospital that displays the values of patient safety which is the top priority in medicine today, where hospitals are seeking accreditation that focus on it. From the other side, such study will help the patients to feel more comfortable and safe during their cancer journey; which may help them to be highly delighted especially when they inform them clearly about everything, and when they treat them in a professional way without worrying on the expensive costs. This may give the patients more hope, confidence, trust and better life stability. The study may also help the nurses to be more knowledgeable so they will be delivering an outstanding service, in this case they will be more motivated and loyal which will affect positively on the performance and productivity levels of nurses, on the satisfaction and retention levels of patients, and finally on the reputation and image of the hospitals. One of these hospitals in the Middle East countries and more particularly in Lebanon is Clemenceau Medical Center, whose mission is caring, safety and excellence. From CMC's mission and vision is to having the pleasure to providing the best care and

practice to their patients. The study has answered both hypotheses. HCGs agreed that the nurses' role in the multidisciplinary round is very important if she/he conveys an accurate patient's assessment and needs because nurses are the front liners and spend more time than physicians and any other HCG. They viewed the nurses as collaborative and doers more than knowledgeable and good-listeners. From the other side, HCGs and patients mostly viewed the nurses' assessment as satisfactory regarding the assessment of nausea and vomiting, appetite and food intake, diarrhoea or constipation, fever, cough, and assessment of pain. We can conclude from the above that the nurses did not address the holistic assessment of patients such as skin impairment, mobility, bladder disorders, sexual difficulties, coping and alopecia. All of this, in addition to the patient education for symptom management, side effects of the treatment, and patient education for emergency and home care resources. This part in particular if affected, will facilitate the readmission to the hospital and make the patients worry about their family relations, work and their future. As mentioned before, the nurses at Clemenceau Medical Center do not have sufficient information and knowledge in order to empower the cancer patients and educate them ahead of time to prevent any complication that may occur. This was proved by the lack of workshops and education about hemato-oncolgy despite the educational program that the hospital provides yearly to its nurses. Also, the patients' interviews have proved that not all the nurses possess equal information and they asked to assign the competent nurse to be his/her charge nurse. Finally, a future research that can be done may be focused on how to maintain a life balance between the work and chemotherapy fashions in order to avoid work loss or family interests.

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