Self-reported facilities and difficulties by nursing workers for return to work after cancer diagnosis

Facilidades e dificuldades autorreferidas por trabalhadores de enfermagem para retorno ao trabalho após o diagnóstico de câncer

Facilidades y dificultades autodeclaradas por trabajadores de enfermería para el regreso al trabajo después del diagnóstico de cáncer

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ABSTRACT
Objective: to analyze facilitating and hindering factors self-reported by health workers in returning to work after a cancer diagnosis. **Method:** cross-sectional descriptive study carried out with nursing workers undergoing cancer treatment in two public hospitals between March and December 2019. Sociodemographic data were collected, from the Work Capacity Index and the Functional Assessment of Cancer Illness Therapy – General, analyzed by descriptive statistics. Protocol approved by the Research Ethics Committee. **Results:** among the participants, 81.9% were female and 54.6% were nursing technicians. Pain was the main obstacle (81.9%) and, for everyone, support from bosses and co-workers was the main facilitator. Excellent work capacity was identified in 45.5% and an average quality of life of 56. **Conclusion:** for a return to work to be possible, it is necessary to offer support to the worker, both due to the effects of cancer treatment and the need of support.
Descriptors: Occupational Health; Occupational Health Nursing; Return to Work; Cancer Survivors.

RESUMO
Objetivo: analisar fatores facilitadores e dificultadores autorreferidos por trabalhadores da saúde para o retorno ao trabalho após o diagnóstico de câncer. **Método:** estudo descritivo transversal realizado com trabalhadores de enfermagem submetidos a tratamento de câncer, de dois hospitais públicos entre março e dezembro de 2019. Coletara-se dados sociodemográficos, do Índice para Capacidade de Trabalho e do *Functional Assessment of Cancer Illness Therapy – General,* analisados por estatística descritiva. Protocolo aprovado pelo Comitê de Ética em Pesquisa. **Resultados:** entre os participantes, 81,9% eram do sexo feminino e 54,6% técnicos de enfermagem. A dor foi o principal dificultador (81,9%) e, para todos, o apoio de chefes e colegas de trabalho o principal facilitador. Identificou-se excelente capacidade para o trabalho em 45,5% e qualidade de vida média de 56. **Conclusão:** para o retorno ao trabalho ser possível, é necessário oferecer suporte ao trabalhador, tanto em função dos efeitos do tratamento do câncer quanto da necessidade de apoio.
Descritores: Saúde Ocupacional; Enfermagem do Trabalho; Retorno ao Trabalho; Sobreviventes de Câncer.

RESUMEN
Objetivo: analizar los factores facilitadores y obstaculizadores autodeclarados por trabajadores de la salud en el regreso al trabajo después de un diagnóstico de cáncer. **Método:** estudio descriptivo transversal realizado con trabajadores de enfermería en tratamiento oncológico, en dos hospitales públicos, entre marzo y diciembre de 2019. Se recolectaron datos sociodemográficos, del *Functional Assessment of Cancer Illness Therapy – General* (Evaluación Funcional de la Terapia para Enfermedad Oncológica), analizados mediante estadística descriptiva. El Comité de Ética en Investigación aprobó el Protocolo. **Resultados:** entre los participantes, el 81,9% consistía en mujeres y el 54,6% en técnicos de enfermería. El dolor fue el principal obstáculo (81,9%) y, para todos, el apoyo de jefes y compañeros de trabajo fue el principal facilitador. Se identificó una excelente capacidad de trabajo en un 45,5% y una calidad de vida promedio de 56. **Conclusión:** para que el retorno al trabajo sea posible, es necesario ofrecer soporte al trabajador, tanto por los efectos del tratamiento del cáncer como por la necesidad de apoyo.
Descriptores: Salud Ocupacional; Enfermaría del Trabajo; Reinserción al Trabajo; Supervivientes de Cáncer.

INTRODUCTION

Since the 1990s, there has been concern about cancer survivors and their return to the world of work, due to the substantial increase in the number of patients surviving the disease. However, many of these people were already experiencing problems in returning to daily life, including resuming work, which was observed in between 44% and 100% of individuals[1].

The global estimate is that by 2030 there will be 21.4 million new cases of cancer and 13.2 million deaths from the disease[2]. The exponential increase in the number of cases is accompanied by advances in the available treatments, enabling people to survive the disease with a better quality of life[3].

The age of people diagnosed with advanced cancer can vary, highlighting its occurrence in the life's period of economic productivity. The increase in survival of people with cancer and, consequently, the resumption of their productive capacity in relation to work, allows them to return during and after treatment[4].

Psychological stability, self-fulfillment, the potential to maintain economic well-being and the impression of a return to normality are pointed out as positive aspects of returning to work after diagnosis. Institutions must therefore be prepared for this phenomenon, as they will receive these workers after discharge, and it is important to plan and develop strategies to receive them properly[5].

In France, 26% of female breast cancer survivors reported a perception of discrimination in the workplace after the end of treatment, more frequent among those who had flexible working hours as a benefit, with a lack of support from colleagues and who returned to work for fear of losing it[6].

Among young adults, aged between 20 and 39, the issue may be more problematic because they are developing both psychological fulfillment and financial security through work[7]. In this group, people up to the age of 24 are seen as the most vulnerable, due to the psychosocial impacts that can jeopardize their success at work, as well as their self-esteem and financial independence from their parents[7,8].

In the coming decades, the number of cancer survivors in the workplace is likely to increase. Individual health patterns and social responses to reintegration into the workplace can influence those who want or need to return to or remain in the workplace. Whether or not they return to work affects not only the cancer survivor, but also their family and carers[9].

The process of returning to and maintaining work can be improved with the involvement of healthcare providers and specific resources[10]. Support must be available from the point of diagnosis and take into account individual characteristics, abilities and limitations, as well as the ramifications of illness and treatment, gender issues and stigmas, and multimodal interventions are indicated[11].

The practicalities and difficulties related to people with cancer and their return to work are well known. However, when it comes to health workers as patients, there seem to be gaps in the literature, especially given the increase in cancer cases, with a consequent rise in treatment and use of chemotherapy[12]. Healthcare workers are exposed to specific carcinogenic factors in their work environment, adding to the occupational risk.

Nursing is the team most studied when it comes to the risk of cancer in female health workers. A higher risk of developing leukemia was identified in nurses due to occupational exposure to antineoplastic medications and even working nights was seen as a possible risk factor. The hypothesis is that exposure to artificial light at night increases the risk of breast cancer as a result of a decrease in the secretion of the hormone melatonin and a subsequent increase in circulating estrogens[13].

It is assumed, then, that health workers will face challenges in the face of cancer treatment, and, with this, we conjecture what would be the facilitating and hindering factors for maintaining work activities and returning to the world of work, self-reported by nursing workers after cancer diagnosis and treatment?

Thus, the objective of this study was to analyze the facilitating and hindering factors self-reported by health workers for returning to work after a cancer diagnosis.

METHOD

This is a cross-sectional descriptive study, with a quantitative approach, carried out between March and December 2019, in two public hospitals located in the municipality of Rio de Janeiro, which provide care to the population through the Unified Health System (*Sistema Único de Saúde*, SUS).

The first (institution A) refers to a hospital specializing in oncology treatment and of high complexity. It was chosen because of these characteristics, considering the presentation of an institutionalized policy for workers who are cancer survivors. The second (institution B) is a general and university hospital, which is a High Complexity Oncology Unit *(Unidade de Alta Complexidade em Oncologia*, UNACON), which is why it was chosen.

The concept of cancer survivor was adopted for individuals with cancer from the moment of diagnosis until the following years, regardless of the outcome, i.e. with the disease in the chronic phase or free of the disease[14].

The population of this study was all nursing workers who had been diagnosed with cancer in the last two years. At institution A, which had a staff of 1,112 nursing workers, the workers' health monitoring sector did not provide

precise data on those who had received a medical diagnosis of the disease. This may indicate that the institution does not have this information or that it did not wish to publicize it.

At institution B, there were 1,402 workers, 324 nurses and 1,078 nursing technicians. Among these, 16 cases of cancer diagnosis were reported to the occupational health and safety service during the period studied. It is believed that, because it is a university hospital, the prerogative of research is a constant in this context, in addition to the fact that services are more highly valued.

The participants were selected through non-probabilistic convenience sampling. Nurses, technicians and nursing assistants who had received a medical diagnosis and had undergone, or were undergoing, treatment for cancer as a primary disease, recurrence or metastasis in the last two years were invited to take part in the study. Workers with unfavorable clinical conditions that prevented data collection, i.e., those undergoing highly complex treatment or with a high dependency degree were excluded.

Potential participants at institution A were contacted by sending an institutional e-mail to all 1,112 nursing staff, informing them of the study's objectives and inviting them to take part. At institution B, the invitation was made by telephone through contacts provided and authorized by the institution itself.

The workers who agreed to take part in the study received the access link by email, and were instructed to register their acceptance to take part in the study and fill in the characterization instrument, including data on illnesses that manifested after joining the institution; health treatments carried out; periodic health examinations; any discomfort in the work sector; time taken to return to work activities; factors that eased and hindered the return to work.

The Work Ability Index (WAI), an instrument made up of ten items summarized in seven dimensions, was also filled out: current work ability compared to the best of a lifetime; work ability in relation to the job's demands; current number of self-reported illnesses and those diagnosed by a physician; estimated work loss due to illness; absenteeism due to illness; own prognosis of work ability; mental resources. Overall it reaches a score between 7 (worst index) and 49 (best index) and has been categorized into four levels of work ability: (I) low (7-27); (II) moderate (28-36); (III) good (37-43) and (IV) excellent (44-49)[15].

The Functional Assessment of Chronic Illness Therapy (FACT), an instrument divided into the domains of physical well-being (seven items), social and family well-being (seven items), emotional well-being (six items) and functional well-being (seven items) was also completed. Its score is obtained from the sum of the four domains and each item in the questionnaire can be answered using the legend: not at all = 0, a little = 1, more or less = 2, a lot = 3, and very much = 4. The maximum score to be obtained is 108 points, emphasizing that the higher the total score, the better the quality of life[16,17]. The request to use the questionnaire in this study was made through the www.facit.org website.

In addition, an open question asked about the facilitating and hindering factors for returning to work.

The data was grouped and categorized using Microsoft Excel® version 2013 and analyzed using IBM® Statistical Package for Social Sciences (SPSS) version 20.0.0, using descriptive statistics with measures of central tendency and simple frequency. The open-ended answers were categorized descriptively and counted using absolute frequencies and percentages.

The study was approved by the Research Ethics Committee of the institutions involved. All the participants were informed about the objectives of the study and signed an informed consent form.

RESULTS

Eleven nursing workers took part, 36.4% (n=4) from institution A and 63.6% (n=7) from institution B.

The non-probabilistic approach was adopted due to the difficulty in accessing the participants' contacts at the institution. At institution B, 43.8% (n=7) of the sixteen selected according to the inclusion criteria agreed to take part.

The majority were female (n=9; 81.9%), aged between 51 and 60 (63.6%) and all were married (n=11). In terms of employment, 54.6% (n=6) were nursing technicians and 45.5% (n=5) nurses; 54.6% (n=6) had worked for between 21 and 30 years and had two jobs; 45.5% (n=5) worked as day laborers, 45.5% (n=5) as day shift workers and 9.1% (n=1) as night shift workers. Everyone's mean salary ranged from six to eight minimum wages (MW), which at the time of data collection corresponded to R$ 998.00 in the city of Rio de Janeiro.

As for the clinical questions, the origin of the tumor was in the breast in 45.5% (n=5) of the participants, followed by the small intestine in 18.2% (n=2) and the other foci being: skin; prostate; large intestine and uterus. All underwent surgery, 18.2% (n=2) also underwent radiotherapy and 27.3% (n=3) underwent chemotherapy. In relation to prognosis, 27.3% (n=3) had metastasized.

The participants' overall Work Ability Index (WAI) score was considered excellent by 45.5% (n=5), good by 36.4% (n=4), moderate by 9.1% (n=1) and low by 9.1% (n=1). Table 1 shows the data related to work ability for physical and mental demands.

Table 1: Classification of work ability in relation to physical and mental demands (n=11). Rio de Janeiro, RJ, Brazil, 2019.

| | Classification | | | | | | | | | |
| | Very good | | Good | | Moderate | | Low | | Very low | |
Requirements	n	%	n	%	n	%	n	%	n	%
Physical	4	36.4	1	9.1	3	27.3	1	9.1	2	18.2
Mental	5	45.5	3	27.3	1	9.1	1	9.1	1	9.1

As each question in the questionnaire has an answer variation and a way of calculating the point to provide the overall score, it was proposed to present a summary for each of the seven domains (Figure 1).

Domains	Summary of each question
Current work capacity compared to the best of your entire life	On a scale of 0 to 10, 63.6% (n=7) scored between 8 and 10.
Ability to work in relation to the job's demands	As for physical demands, 36.4% (n=4) rated their ability as very good. 45.5% (n=5) rated their mental capacity as very good.
Current number of diseases diagnosed by a physician	Back and/or limb injuries were reported by 36.4% (n=4).
Estimated work loss due to illnesses	For 45.5% (n=5) there is no impediment because they do not have any illness.
Absences from work due to illness in the last year	63.6% (n=7) had been absent from work for between 100 and 365 days in the last year due to health problems, medical appointments or exams.
Self-prognosis of ability to work in two years' time	72.7% (n=8) answered that they would be quite likely to be able to do their current job for the next two years.
Mental resources	45.5% (n=5) claimed that they always enjoyed their routine. 45.5% (n=5) claimed that they almost always felt active and alert. 45.5% (n=5) felt continually hopeful.

Figure 1: Domains of the Work Ability Index questionnaire and summary of the ten associated questions. Rio de Janeiro, RJ, Brazil, 2019.

The total score generated by the FACT-G made it possible to analyze the self-reported study's participants' quality of life, as shown in Table 2.

Table 2: Overall score and variation in the FACT-G domains according to each participant (n=11). Rio de Janeiro, RJ, Brazil, 2019.

| | Domains | | | | |
Participants	Physical Well-being	Social/Family Well-being	Emotional Well-being	Functional Well-being	FACT-G score
P1	1	26	4	27	58
P2	1	21	9	26	57
P3	9	17	6	18	50
P4	-	28	4	28	60
P5	11	20	5	20	56
P6	17	17	12	14	60
P7	1	21	9	26	57
P8	5	18	5	16	44
P9	-	25	4	23	52
P10	-	26	4	27	57
P11	11	20	5	20	56

As observed, the FACT-G score ranged from 44 to 60 points, with a mean of 56 (+4.55; median=57). The domain with the lowest mean (6.09) was Emotional Well-being and P6 had the most balanced score.

In relation to the factors that hinder and ease returning to work, Table 3 shows the related data.

Table 3: Facilitating and hindering factors for returning to work (n=11). Rio de Janeiro, RJ, Brazil, 2019.

Factors	n	%
Impediments/Difficulties		
Pain	9	81.9
Debility	5	45.5
Difficulty in wound healing	3	27.3
Movement and load limitations	3	27.3
Treatment-related adverse effects	2	18.2
Fatigue	2	18.2
Tiredness	2	18.2
Facilitating factors		
Support from management/coworkers	11	100
Family support	6	54.6
Need to produce/feel useful	6	54.6
Relocation to a sector that required less physical effort	2	18.2

Pain was the biggest factor that prevented/hindered the study participants from returning to their jobs, cited by 81.9% (n=9) and support from management and coworkers was cited as a facilitating factor by 100% of the workers.

DISCUSSION

The data made it possible to observe changes related to work ability and quality of life, as well as facilitating factors and hindrances to returning to work among the participants.

Despite the fact that the population of workers at the two institutions involved in the study was chosen because of their peculiarities regarding the treatment of people with cancer, the sample of eleven participants did not allow for in-depth inferences. This difficulty in accessing individuals can be associated with the approach used, the difficulty in accessing information about potential participants on the part of one of the scenarios, and even the lack of return or denial of the invitation. However, even though the data collected cannot be generalized, it does provide a glimpse of situations that can be found in larger and more representative samples.

In relation to the higher frequency of females (81.9%), the nursing history provides this justification and explains the occurrence of breast cancer identified in the sample.

It should be noted that women are susceptible to higher stress levels as a result of their duties, which most of the time include household chores, childcare and employment[18]. Thus, the return to work may not only be determined by the disease, treatment and support network after the medical diagnosis of cancer, but also by the multiple working hours involved[19].

The most frequent age group in the sample explains why most of the participants have worked at the institution for between 21 and 30 years. This is a sample with a profile compatible with the statutory workforce, which corresponds to the population studied and which, at the same time, presents an age group at risk of cancer, unlike the predominant profile of young adults in nursing in the study carried out in 2013[19].

The fact that the work shift is mostly daytime can be explained by the larger number of staff on this shift, where there are more procedures and tasks. This information is relevant because nursing work in the hospital environment, corresponding to the scenario of this study, has been considered stressful and unhealthy[20-22], with exhausting activities due to its various duties and high demands[23,24]. This fact is not necessarily associated with the disease, but with situations that can make it difficult for nursing workers affected by cancer to return to work.

The detection of two jobs is a common and complex situation related to the profession in Brazil[18], with these workers being more prone to fatigue and stress[25] and 2.24 more likely to be exposed to occupational stress compared to professionals with a single job[24]. However, this was not cited by the participants in this study as a factor making it difficult for them to return to work.

The salary range between six and eight minimum wages is higher than the mean salary for the category and is not uniform among most nursing workers[19]. Earn dissatisfaction is described as a determining factor in working hours, as well as a stressor, which can lead to a reduction in the quality of life of the professional, generating the need for two or more jobs in order to survive.

In relation to professional ties, considering the data on professional registration in nursing in Brazil, the majority are nursing technicians[26]. However, further inferences are not possible based on the sample obtained.

The treatment of a person with cancer has long-term physical effects and can affect working practices, due to changes in capacity/skill and fatigue[27], with the possibility of caregivers feeling overburdened[28]. Thus, analyzing the well-being of people undergoing cancer treatment, as well as their ability to work, was considered in this study when trying to identify the factors that hinder and ease returning to work.

The results obtained with the WAI and FACT-G can explain why 72.7% of workers returned to their jobs after discharge. These figures for work ability differ from a study involving other chronic non-communicable diseases, where participants described their work ability as inadequate or moderate[29,30].

This fact cannot be associated with the occurrence of cancer in this study, due to the sample studied. However, considering the issue at hand, it should be noted that the growing survival rate of people with cancer results in an increase in the frequency of active workers and, consequently, changes in the work environment may be necessary.

The literature describes that people who were working at the time of their cancer diagnosis remained at work for between two and 14 years after their diagnosis, with a combined prevalence estimate of 0.73 (95% CI 0.69-0.77)[31]. Supporting cancer workers in managing the side effects of treatment and their impact on work is likely to become an increasingly common and necessary demand.

In this study, the mean FACT-G score suggests that the sample's quality of life was in the mean.

The FACT-G provides a sensitive measure of quality of life, meeting the validation requirements for use in cancer clinical trials[32], and is the second questionnaire dealing with cancer-related quality of life used in clinical trials[33]. A reduction in both scores is associated with worsening of the disease, and a cut-off score of 62 or less may indicate clinically low quality of life[34]. A quick version, called FACT-G7, is an option for estimating the FACT-G of patients in clinical practice or in research investigations, with or without additional specific evaluations of the disease or treatment[35], but at the time of data collection there was no psychometric study for the use of this version in Brazilian Portuguese, which prevented it from being chosen.

Financial toxicity analysis of cancer survivors has also used the FACT-G to measure their quality of life[36]. Financial toxicity is being identified more and more frequently[37,38] and refers to the burdens that people with cancer have to deal with. Initially associated with financial costs, its use has expanded to include Health-related Quality of Life (HRQoL), symptom burden, adherence and, more recently, survival[37,39,40].

It should be noted that the precariousness of employment relationships is likely to increase the financial impact on the lives of nursing workers in Brazil.

The facilitating factors observed are shown in green and, in red, those described as impeding or hindering the return to work, related to the Cancer and Work Model, based on a literature review on cancer survivorship and incapacity for work, associated with their clinical experience[42].
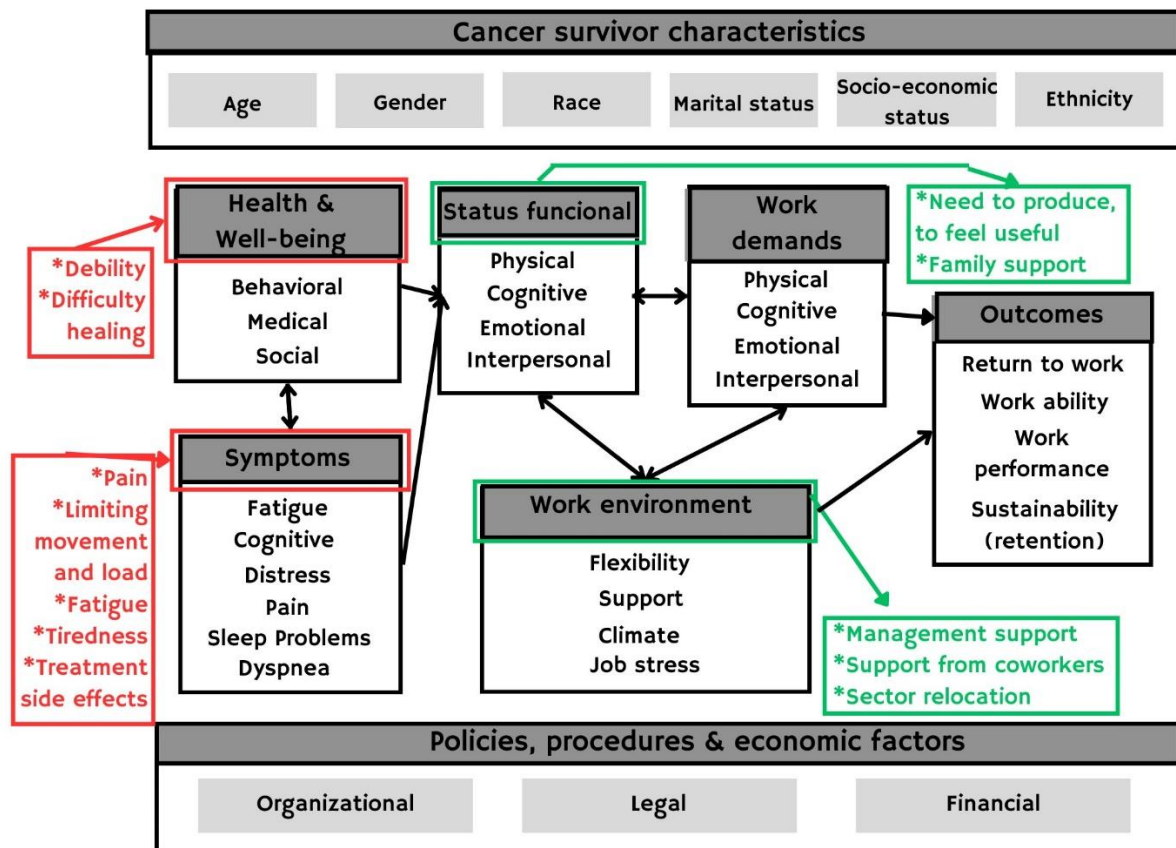
Figure 2: Return to work model and variables found. Rio de Janeiro, RJ, Brazil, 2019.
Adapted from Feuerstein et al., 2010. Free translation of the model by the team of authors.

The proposed clinical model is linear, with seven broad categories of variables associated with four possible outcomes: return to work, ability to work, performance and job retention. The categories are linked to outcomes related to studies involving health and well-being, symptoms, function, work demands, work environment and policies, procedures and economic factors. The model suggests that work outcomes are influenced by discrepancies in this interaction and proposes that a person's functional status should be aligned in a limited way with the work demands in each domain[42].

In this study, all the elements identified are considered and interrelated. However, there is still a need to uncover and discuss many other aspects that influence the return to work.

Advanced age, chemotherapy, negative health outcomes and a lack of adjustments at work are all factors that prevent people from maintaining their employment relationship, as described in the literature, when they are diagnosed with cancer[31]. Gaps in studies on the return to work of people with cancers other than breast cancer, men, people on low incomes and more diverse populations have been pointed out in the literature[43].

The importance of evaluating the differences between employed and self-employed workers, the main sequelae related to the disease or treatments and the organization of workplaces is recognized. This tends to have an impact on people's professional lives as well as their ability to stay in work.

Fatigue, quality of life and work ability are important and interrelated elements that should be measured and monitored among all nursing workers, even in the absence of cancer. Guaranteeing working conditions on a daily basis can prevent injuries and incapacity to work. In addition, the peculiarities of nursing work need to be studied and related in order to promote better working conditions for this population.

It should also be considered that work brings considerable benefits to workers and their families, and to employers, provided they offer safe and supportive workplaces.

Cancer survivors need to consider personal, employer and wider contextual factors when deciding whether and when to return to work[42]. Thus, the entire network involved must work together, combining their respective skills and experience to create a powerful multidisciplinary team.

Within this team, the occupational health and safety professional has the opportunity to use the knowledge and experience they have gained in their traditional role to help ensure that all health and safety risks are properly identified and assessed; helping to identify reasonable, appropriate and risk-free adjustments; supporting and guaranteeing the implementation of such adjustments; and monitoring their ongoing impact and effectiveness. This requires a coordinated approach, focused on producing the best result for the individual returning to the workplace.

Study limitations

The study's limitations are the size of the sample, attributed to the low adherence of nursing workers diagnosed with and undergoing cancer treatment at institution A, where it was not possible to obtain direct information. At institution B, sixteen workers were eligible, but seven responded to the contact made. For this reason, the results cannot be generalized or extrapolated to the population of nursing workers diagnosed with cancer. Due to the time allotted for the study, it was not possible to look for another institution as a co-participant.

Even so, it is important to present these findings, which are not widely disseminated in national research, as well as to point out the difficulties in accessing workers through institutional channels.

CONCLUSION

The results may help to identify ways in which the health sector can ease the nursing workers return to work after cancer diagnosis and treatment. As well as remedying the factors that make it difficult to return to work when these are not physiological, since these people are exposed to situations that cause discomfort during the course of treatment and afterwards. In this sense, once the problem and its impact on cancer patients are known, it is possible to create mechanisms for managing and dealing with it.

The nursing workers who took part in the study experienced various side effects, with pain being the most frequently mentioned and characterized as a hindrance to returning to work. Among the factors considered to be facilitators, the support of management and coworkers was mentioned by all. The worker's personal self-assessment showed that the majority of them had an excellent capacity for work according to the WAI, while their quality of life according to the FACT-G showed them to be in the mean, comparing their answers with the total possible value offered by the instrument.

Studies with larger samples are suggested, in order to provide support for occupational health departments, as well as managers who work directly with these workers.

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