

BMJ Open Taking action, return-to-work strategies used by Iranian cancer survivors: a qualitative study

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ABSTRACT

Objectives The transition back to work after cancer is a significant milestone for many survivors, affecting their financial stability, psychological well-being and overall quality of life. Return-to-work (RTW) process is often complicated by lingering physical and cognitive impairments, changes in self-identity and workplace dynamics. Understanding how cancer survivors navigate this process is crucial for the development of effective support systems. This study aimed to explore strategies employed by cancer survivors in managing the RTW process.

Design This study employed a qualitative content analysis approach to explore RTW strategies used by cancer survivors.

Setting The study was conducted at a referral cancer centre and the workplaces of cancer survivors located in East Azerbaijan, Iran.

Participants A total of 22 cancer survivors were selected using purposive sampling. These participants had completed primary cancer treatment and had rich and diverse RTW-related experiences. Data were collected through semi-structured, face-to-face interviews and then analysed using the inductive content analysis approach described by Graneheim and Lundman (2004).

Results 'Active Strategies for Returning to Work' constituted the main theme and consisted of three categories, including assessing the situation, self-accommodation and impressing the workplace.

Conclusions Cancer survivors actively engaged in RTW. They evaluate their situations before returning to work, seek to accommodate themselves to their circumstances and impress their workplaces to gain the necessary support. Healthcare providers, employers and families, as the most influential parties in the RTW process of cancer survivors, should recognise survivors' positive strategies and provide informational, financial, emotional and occupational support.

INTRODUCTION

Cancer is a prevalent health concern, with approximately half of all diagnoses occurring during working age.¹ The intersection of cancer and employment poses significant challenges as the disease often disrupts work outcomes and is frequently associated with job loss.² Job loss among cancer survivors

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Qualitative designs are appropriate to explore the lived experiences of individuals. A relevant qualitative design was applied in this study to extracted lived experiences of cancer survivors about returning to work.
- ⇒ The study sample included a good variety of demographic characteristics.
- ⇒ The results of this study did not encompass all aspects of the return-to-work process.
- ⇒ The study included only cancer survivors who returned to work after treatment and do not include those who did not return to work.

can lead to a cascade of adverse effects, including loss of financial stability, damage to personal and social identity, social isolation and a range of psychological disorders such as anxiety, depression and mental turmoil.³⁻⁶ Advancements in diagnostic and treatment procedures have significantly improved survival rates, allowing a substantial number of cancer patients to return to work (RTW).^{1,7} Returning to work after cancer is crucial not only for survivors but also for their families, employers and society at large.² Returning to work provides financial stability, meets psychosocial needs and enhances the overall quality of life of survivors.⁸

Empirical evidence suggests that the majority of cancer survivors express a strong desire to RTW.⁸⁻¹¹ Nevertheless, the process is fraught with numerous challenges that may deter or delay return. These challenges include a lack of information regarding the RTW process, diminished physical and mental capacities resulting from the disease and its treatment, concerns about the reactions of coworkers and supervisors and unsupportive work environments.^{8,12} Despite these obstacles, many survivors manage to reintegrate into the workforce.¹³

The process of returning to work is multifaceted and complex, often requiring tailored

support and intervention. Survivors may face ongoing health issues such as fatigue and cognitive impairment, which can affect their work performance and attendance.¹⁰ Additionally, stigma associated with cancer can result in discrimination or differential treatment in the workplace, further complicating the RTW process.¹¹ Effective RTW strategies must therefore address both the physical and psychological needs of cancer survivors, ensuring that they are supported not only in their work tasks but also in their overall well-being.¹²

Based on this evidence, strategies and experiences of cancer survivors navigating the RTW process have remained underexplored, particularly in developing countries.^{3 14} As cancer incidence and survival rates continue to rise in these regions,^{2 15} there is a pressing need for more comprehensive support systems to facilitate RTW. Iran, as a developing country with a population of nearly 86 million, has a significant demographic of individuals of working age, and a large proportion of the Iranian population does not have any type of life insurance.¹⁶ Finding a suitable job is a major social challenge in Iran, and it is even more challenging for cancer survivors, who have less chance of finding a job after treatment.¹⁷ The age-standardised ratio of cancer incidence in Iran is approximately 128 per 100 000, which is expected to double by 2035.^{18 19} Despite this, supportive associations and occupational rehabilitation services for cancer survivors are still underdeveloped in Iran.²⁰

Iranians are employed in governmental organisations, non-governmental organisations and freelance roles. Employees in governmental organisations typically have the opportunity to take approved sick leave based on their physician's recommendation and may have their disability status officially recognised following confirmation by a medical commission.²¹ However, these options are generally unavailable or severely limited for those working in non-governmental sectors or freelancing. Additionally, taking sick leave or opting for disability retirement often leads to significant income reduction and further psychosocial challenges for the affected individuals.²² Given these circumstances, work remains a critical source of financial stability and psychosocial support for most Iranian cancer survivors,²⁰ strongly motivating their desire to RTW.

Given the lack of information on the RTW-related experiences of cancer survivors in Iran, this qualitative study aimed to fill this gap by exploring how Iranian cancer survivors manage their RTW. Insights from this study could prove invaluable for survivors, healthcare systems and employers in facilitating this process. By understanding the unique challenges and strategies employed by cancer survivors in Iran, stakeholders can develop targeted interventions that promote successful reintegration into the workforce, thereby improving the quality of life of survivors and contributing to the broader economic and social health of the country.

METHODS

Study design

This study used a qualitative content analysis approach to investigate the experiences of cancer survivors who had returned to work following the completion of primary treatment. The study was conducted at a referral cancer centre and workplaces of cancer survivors located in East Azerbaijan, Iran.

Participants

Eligible participants included cancer survivors of working age (15–65 age group) who had completed primary treatment and resumed work activities. A total of 22 eligible cancer survivors who had rich and in-depth RTW-related experiences were selected using the purposive sampling method. The initial selection focused on male participants based on the cultural context of Iran, where men are traditionally perceived as primary breadwinners. Subsequent participants were chosen based on insights from previous interviews. To ensure the trustworthiness of the study, participants were selected to represent a diverse range of demographic characteristics, including age, sex, marital status, type of cancer and type of job. Access to participants was initially facilitated through the cancer centre, which identified individuals who returned to work after treatment. Participants were then asked to refer other eligible individuals.

Data collection

Data were collected through semi-structured face-to-face interviews conducted between January 2019 and March 2020. Interviews (four conducted in the cancer centre and 18 in participants' workplaces) were held in private and comfortable rooms preferred by the participants. To establish rapport, participants were initially asked questions on general topics such as their work history, job interests and daily work experiences. This was followed by the main questions of the study: '*How did you manage your return to work?*' and '*What actions did you take to return to work?*'. Additional probing questions were then used to gain deeper insight into their experiences. The duration of the interviews ranged from 20 to 90 min (mean±SD = 54.11 ± 15.81 min), with initial interviews being longer and subsequent interviews shorter as specific questions emerged during the analysis. Data collection continued until data saturation was achieved, indicated by the absence of new concepts or codes in the final three interviews.²³ All the interviews were digitally recorded and transcribed verbatim.

Patient & public involvement statement

Patients and the public were not directly involved in the design, conduct, reporting or dissemination plans of this study. However, participants' feedback during the data collection phase was used to refine themes and categories. Accordingly, it was ensured that the analysis accurately reflected participants' experiences and perspectives.

Trustworthiness

To ensure trustworthiness, quality criteria of credibility, dependability, confirmability and transferability were meticulously considered.^{24 25} Credibility was enhanced through prolonged engagement with the data, member checking (validating preliminary findings with participants) and peer debriefing (confirming findings with team members). Dependability was bolstered by having multiple team members discuss and evaluate the data collection and analysis processes during weekly meetings. Confirmability was maintained by documenting all stages of the study and having a second researcher review each stage. Transferability was supported by passive sampling, and a detailed description of the study participants, setting and results was provided.

Data analysis

Data analysis commenced immediately after transcription of the first interview. Data were managed using MAXQDA software (version 10.0; Udo Kuckartz, Berlin, Germany) and analysed using the inductive content analysis approach described by Graneheim and Lundman (2004).²⁶ The text was segmented into the smallest semantic units (codes) and then grouped into primary categories. These primary categories were then condensed into abstract categories. Finally, the main categories were synthesised into an overarching theme, identified as 'active strategies for returning to work'.

RESULTS

The mean age of participants was 40.90±10.76 years. The mean disease duration since diagnosis was 19.13±7.60 months, and the mean time duration since returning to work was 10.72±6.85 months. 12 participants (54%) were male, and 15 (68%) were married. The participants had a diverse range of cancer types including leukaemia (n=7), breast cancer (n=6), colorectal cancer (n=4), brain cancer (n=1), liver cancer (n=1), lung cancer (n=1), testicular cancer (n=1) and pituitary carcinoma (n=1). Their characteristics are presented in [table 1](#).

Strategies used by cancer survivors to facilitate RTW

The main theme derived from the data analysis was 'active strategies for returning to work'. It was found that cancer survivors employed various strategies in their efforts to RTW. This theme included three general categories: assessing the situation, self-accommodation and impressing the workplace. [Table 2](#) presents the main themes and related categories.

Category I: assessing the situation

Given the restrictive nature of cancer, which reduces patients' working capabilities and concerns about workplace reactions, cancer survivors assess their situation before returning to work. They choose appropriate strategies to alleviate their concerns and increase their chances of success in the workplace. This category

Table 1 Cancer survivors' demographic characteristics

N	Age	Gender	Education
1	40	Male	Illiterate
2	50	Male	Elementary
3	20	Male	Diploma
4	20	Male	Associate degree
5	30	Male	Bachelor
6	30	Male	Diploma
7	40	Male	Elementary
8	40	Female	Bachelor
9	30	Female	Bachelor
10	50	Female	Bachelor
11	30	Female	Bachelor
12	30	Female	Bachelor
13	20	Male	Elementary
14	30	Male	Elementary
15	40	Female	Bachelor
16	30	Male	Diploma
17	60	Male	Doctorate
18	30	Female	Diploma
19	50	Female	Master's degree
20	50	Female	Master's degree
21	50	Female	Master's degree
22	35	Male	Bachelor

comprises three sub-categories: self-assessment, evaluation of supportive resources and gathering information about RTW.

Sub-category I: self-assessment

Cancer survivors are concerned about whether their existing abilities are sufficient to meet their job demands. Accordingly, they focus on their individual physical and mental abilities.

Before returning to work, I looked at my condition; I wanted to see if I could handle my job. During the time I was home, I tried to walk and did some work. I was trying to assess my physical condition. (P5, male, colorectal cancer)

Survivors also evaluated their health before returning to work. Confirmation of the recovery process by the treating physician, absence of disease exacerbation and no new cancer-related symptoms constituted indicators of good health and encouraged cancer survivors to lead the RTW process better.

I took some tests like blood tests, sonographies, and CT scans before returning to work. After I was sure about my health condition, I decided to return to work. (P 16, male, Hodgkin's lymphoma)

Table 2 Cancer survivors' strategies for return to work

Main theme	Main categories	Primary categories
Active strategies for returning to work	Assessing the situation	Self-assessment
		Evaluation of supportive resources
		Gathering information about returning to work
	Self-accommodation	Prioritising health
		Adjusting expectations
		Concealment
		Disclosure
	Impressing the workplace	Making changes in job condition
		Subtle development of support system
		Obtaining direct support

Sub-category II: evaluation of supportive resources

Many cancer survivors proactively assess their existing supportive resources before returning to work. These include financial, psycho-emotional and occupational support. Family members, co-workers, employers and friends were the main components of such support systems. Based on the assessment of support, the survivors used different RTW strategies. Positive appraisal of the supportive system led to constructive strategies, whereas negative appraisal led to negative ones.

Honestly, before I got back to work, I was recalling just what my supportive resources were; I was thinking about the supportive resources available around me and I was wondering if I would be supported in the workplace. (P 15, female, breast cancer)

Sub-category III: gathering information about RTW

Most cancer survivors try to collect information about the optimal time for RTW, potential side effects on their health and suitable workloads. They sought information from various sources, including print and online resources, medical staff, knowledgeable individuals and those with similar experience. Participants reported numerous challenges in gathering information, especially because of limited resources in Persian.

I would collect related information from doctors, nurses, and papers; I wanted to know whether I could work and what I could do; I would ask people who returned to work after recovering from cancer. (P 5, male, colorectal cancer)

Category II: self-accommodation

After understanding their situation, cancer survivors focus on what they need to do during and after returning to work. They describe five strategies related to self-accommodation.

Sub-category I: prioritising health

Most cancer survivors prioritised recovery and health improvement before and after returning to work, and some postponed it until they felt adequately recovered.

I didn't sacrifice myself to my work; my wellbeing was my number one priority. I need to be healthy first to be able to keep working. I also try to continue my recovery process after returning to work. I try to use the stairs instead of the elevator; I always take water with me. (P 11, female, liver cancer)

Some participants returned to work despite poor health due to inadequate financial support.

I wasn't recovered completely and I knew that returning to work before full recovery would threaten my health condition, but I had no other choice; I was under financial pressure. (P 2, male, lung cancer)

Sub-category II: adjusting expectations

Cancer survivors adjust their expectations because of their reduced abilities after cancer treatment. They sought to balance their abilities, income and financial condition by accepting their limitations and adjusting their behaviour accordingly.

I knew I could not do the same amount of work as before. My income had dropped after returning to work. So, we reduced unnecessary costs, for example, by avoiding eating out. (P 1, male, liver cancer)

Sub-category III: concealment

In non-supportive environments, survivors conceal their disease to avoid stigmatisation and mockery. They hid symptoms, avoided discussing the disease, provided incomplete information and undertook diagnostic-therapeutic measures discreetly.

I would try to make my appearance look natural by putting on makeup. I tried to hide my problem from them. Whenever they asked, I told them it was a skin problem that was taken care of. (P 12, female, breast cancer)

Sub-category IV: disclosure

Conversely, survivors were more open about their problems in supportive environments where they felt respected and supported. The disclosure provided major support for these environments.

Our workplace had a very good atmosphere and I knew my colleagues would support me. After returning to work, I began talking to them about my disease and abilities. (P 15, female, breast cancer)

Sub-category V: making changes in job condition

To manage their job tasks, survivors often change their working conditions during and after returning to work.

These strategies include work adjustment and changing careers.

Work adjustment: many survivors concluded that their current abilities were insufficient to meet their previous workloads. To protect their health, they made changes such as reducing working hours, changing workplaces, sharing workloads and altering work shifts. Participants made the following statements in this respect:

I couldn't work making carpets all day long. My body couldn't endure that much pressure. I decided to work making rugs, but not for the whole day; I worked a few hours a day and had to reduce my workload. (P 7, male, leukemia)

I wouldn't put too much pressure on myself at the beginning. I would stop working as soon as I felt tired; I began working at a slow pace. (P 5, male, colorectal cancer)

Changing career: in some cases, survivors found their previous job incompatible with their current physical and mental abilities. Family members, physicians and employers sometimes prohibit them from continuing their previous roles. This prompted them to seek new jobs that were easier, temporary, lower paid and part-time.

I couldn't do construction work anymore; it was too heavy and overwhelming; I would have died if I had continued. I worked as a street peddler, which was temporary and low-paid, but manageable. (P 1, male, liver cancer)

Category III: impressing the workplace

Cancer survivors seek to alleviate doubts and increase their chances of success by gaining workplace support. They used two groups of strategies: subtle development of the support system and obtaining direct support.

Sub-category I: subtle development of support system

Survivors employed strategies such as actively engaging with colleagues and making efforts to be seen to influence them and indirectly gain their support.

Active engagement of colleagues: survivors employed various strategies to gain support from their colleagues, including developing friendly relationships, showing respect, assisting with tasks, answering questions, expressing appreciation, accepting requests, offering advice, being amiable and adhering to rules.

After returning to work, I tried to work with everyone amiably; I ate breakfast with them, answered their questions, and advised them. (P 8, female, breast cancer)

Trying to be seen: survivors worried about employers' reactions in unsupportive environments. Accordingly, they tried to see and prove their worth through strategies such as working overtime, returning to work despite incomplete recovery, performing tasks accurately, arriving early and not complaining.

After returning to work, I tried to get my workplace before others; I also tried to do my job perfectly and even did some work at home. (P12, female, breast cancer)

Sub-category II: obtaining direct support

Survivors sought help from colleagues and employers to cope with their responsibilities in unsupportive work environments. The participants described their experiences in this regard as follows:

I referred to my employer and requested additional staff to help me handle my work. I couldn't perform all the tasks by myself. (P 10, female, colorectal cancer)

The displacement of heavy equipment was hard for me, so I asked my colleagues to help. (P 16, male, Hodgkin's lymphoma)

DISCUSSION

This study aimed to explore how Iranian cancer survivors manage the RTW process. An interesting finding of this study was that cancer survivors actively engaged in the RTW process and coped with the challenges they encountered. This study revealed that cancer survivors employed several proactive strategies, including assessing the situation, self-accommodation and impressing the workplace to navigate the RTW process. These findings align with and expand on the existing literature in the field.

A noteworthy aspect of this study was that in most cases, cancer survivors did not blindly RTW, risking their well-being. Instead, they prepare for workplace challenges using specific strategies. They assessed their situation before returning to work and increased their awareness of their condition through self-assessment, evaluation of supportive resources and gathering of necessary information. This finding aligns with the results of a study by Van Egmond *et al* (2017) who stressed the importance of tailored interventions addressing both personal and workplace factors, particularly for those who have experienced job loss.²⁷ Similarly, de Casterlé *et al* (2012) found that cancer survivors carefully assessed their health conditions and abilities due to doubts about their capabilities before returning to work.²⁸ Xu *et al* (2023) also highlighted the dynamic nature of the RTW process in which survivors continuously adjust their coping strategies based on personal and external resources, underscoring the significance of a supportive work environment.¹¹ The participants in our study actively sought RTW-related information to reduce uncertainty and develop a personalised RTW plan. This is consistent with the results of a systematic review by Bottaro and Faraci (2022), which emphasised the necessity of personalised RTW interventions tailored to the individual's circumstances.¹⁴ The challenges in gathering information identified in our study also echo the findings of Nekhlyudov *et al* (2020), who discussed the multifaceted challenges

cancer survivors face related to insurance, finances and employment, further highlighting the need for comprehensive support systems.⁴ Based on the findings, informational support that helps cancer survivors make informed decisions about RTW is essential, along with other types of support. Medical team members should provide necessary information about RTW and prepare cancer survivors for a safe RTW journey.

Assessing the situation has emerged as a pivotal stage that influences subsequent strategies for cancer survivors. Based on the assessment results, survivors adopted two main strategies: self-accommodation and impressing the workplace. They have implemented various approaches, including prioritising health, adjusting expectations, concealing or disclosing their condition and making job-related changes to adapt to their new circumstances.

Greidanus *et al* (2021) corroborated the importance of workplace support in facilitating such adjustments.¹⁵ Understanding and support from employers, along with flexible work arrangements, were critical for successful RTW. This reinforces our findings on the necessity of accommodating work conditions and supportive colleagues in the RTW process. Moreover, previous studies have reported that access to supportive resources and lower financial dependency on work enabled some cancer survivors to prioritise their health and delay returning to work.^{29–31} Paltrinieri *et al* (2022) reported that working night and evening shifts, along with physically demanding work, negatively impacts cancer survivors' RTW.³² Sun *et al* (2016) and Tamminga *et al* (2012) emphasised the significant role of supportive work environments and flexible work arrangements in overcoming the physical and psychological barriers faced by cancer survivors. In line with our findings, they demonstrated that accommodating work conditions and supportive colleagues are vital for facilitating the RTW process.^{33–34} Results indicate that cancer survivors' evaluation of workplace conditions significantly influences their strategies for returning to work. Therefore, policymakers should support cancer survivors' RTW by enacting supportive laws, employers by improving work environments and creating a supportive atmosphere and colleagues through psychosocial support.

A novel and interesting finding of this study, rarely reported in previous research, was the consistent attempt by cancer survivors to gain workplace support by making positive impressions at work. In addition to personal adjustments, cancer survivors actively sought workplace support through subtle development of support systems and direct engagement. In another study, efforts to create a friendly atmosphere have been reported as a positive RTW strategy to help reduce workplace friction for cancer survivors.²⁷ Another study noted that maintaining connections with colleagues and employers is a positive strategy.³⁵

Silver *et al* (2013) emphasised the necessity of impairment-driven cancer rehabilitation, supporting our assertion that targeted interventions and comprehensive

rehabilitation services are crucial for successful reintegration of cancer survivors into the workforce.³⁶ This finding underscores the importance of proactive strategies that survivors use to gain workplace support and to adapt to their new work environment. In the present study, cancer survivors proactively changed their working conditions after gaining a better understanding of their health status and capabilities. Most tried to adjust aspects of their jobs, consistent with the findings of Sandberg *et al* (2014) and Swanberg *et al* (2017), who reported that reducing working hours, making workplace modifications, and decreasing workloads were effective strategies in the RTW process.^{37–38}

Strengths and limitations

It is important to emphasise that this qualitative study aimed to provide a description of strategies that cancer survivors retrospectively identified as helpful in their efforts to RTW. It should be noted that the results of this study did not encompass all aspects of the RTW process. The results of this study encompass only the experiences of cancer survivors who returned to work after treatment and do not include those who did not RTW. Further research involving influential stakeholders, such as employers, colleagues and especially individuals who did not RTW after cancer, is necessary for a more comprehensive understanding. Additionally, it is crucial to highlight that the qualitative studies of this type generate hypotheses that require further testing through well-controlled trials.

Research, practice, and policy implications

This study emphasises the critical need for comprehensive and individualised support systems to facilitate RTW among cancer survivors. A collaborative approach involving healthcare providers, employers and policy-makers is essential for delivering a multidimensional support framework that addresses the informational, emotional, financial and occupational needs of survivors. Key interventions should include promoting workplace flexibility, such as adjustable hours and workloads, and creating supportive environments that reduce stigma and aid survivors' reintegration. Additionally, educational programmes targeting employers and co-workers can improve understanding of the specific challenges cancer survivors face and foster a more empathetic and supportive work culture. Policy reforms are particularly needed in developing countries to incorporate cancer rehabilitation services within occupational health programmes and ensure robust legal protection against discrimination. Engaging cancer survivors in the decision-making process related to their RTW plans ensures that interventions are tailored to their personal and professional aspirations, thereby enhancing the success of reintegration. Ongoing research is crucial to refine these strategies and interventions and to expand the knowledge of effective support mechanisms tailored to diverse survivor experiences and various employment settings.

CONCLUSIONS

Returning to work is a significant process that involves cancer survivors' active engagement. This study revealed that these individuals employ specific proactive strategies to address work-related challenges and enhance their chances of success at work. Cancer survivors assess their situation before returning to work and take appropriate measures based on their evaluations. They attempt to accommodate themselves according to their self-assessment and strive to gain workplace support through subtle development of support systems and direct support from coworkers and employers. Although most of the identified strategies are constructive and positive, some, such as concealment and trying to be seen, are negative strategies that require modification.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, conduct, reporting or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants. The Ethics Committee of Tabriz University of Medical Sciences approved the study protocol with the ethical code TBZMED.REC.1394.755. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. The datasets generated and/or analysed during the current study are available from the corresponding author upon reasonable request. Given the sensitive nature of participants' information, data sharing is subject to confidentiality agreements.

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