RESEARCH ARTICLE

Return to Work in Multi-ethnic Breast Cancer Survivors – A Qualitative Inquiry

Foo Lan Tan[1], Siew Yim Loh[2]*, TinTin Su[3], VW Veloo[4], Lee Luan Ng

Abstract

Introduction: Return-to-work (RTW) can be a problematic occupational issue with detrimental impact on the quality of life of previously-employed breast cancer survivors. This study explored barriers and facilitators encountered during the RTW process in the area of cancer survivorship. Materials and Methods: Six focus groups were conducted using a semi-structured interview guide on 40 informants (employed multiethnic survivors). Survivors were stratified into three groups for successfully RTW, and another three groups of survivors who were unable to return to work. Each of the three groups was ethnically homogeneous. Thematic analysis using a constant comparative approach was aided by in vivo software. Results: Participants shared numerous barriers and facilitators which directly or interactively affect RTW. Key barriers were physical-psychological after-effects of treatment, fear of potential environment hazards, high physical job demand, intrusive negative thoughts and overprotective family. Key facilitators were social support, employer support, and regard for financial independence. Across ethnic groups, the main facilitators were financial-independence (for Chinese), and socialisation opportunity (for Malay). A key barrier was after-effects of treatment, expressed across all ethnic groups. Conclusions: Numerous barriers were identified in the non-RTW survivors. Health professionals and especially occupational therapists should be consulted to assist the increasing survivors by providing occupational rehabilitation to enhance RTW amongst employed survivors. Future research to identify prognostic factors can guide clinical efforts to restore cancer survivors to their desired level/type of occupational functioning for productivity and wellbeing.

Keywords: Breast cancer survivors -return to work - barriers - facilitators - qualitative study

Asian Pacific J Cancer Prev, **13 (11)**, 5791-5797

Introduction

Work is important for wellbeing and is needed for economic, socialisation and accomplishment reasons, as well as to be a productive contributor to society. In cancer survivors, work gives a sense of return to normalcy and provides a constructive, rewarding routine that enhances health and wellbeing. Report from Labour force Malaysia, the average women's participation in the labour force in Malaysia has increase from 34.8 per cent in 2000 to 35.2 per cent in 2009. Currently, with early detection and better treatment, survival rates have improved steeply across many types of cancer. In lieu of this, factors such as return to work, which contributes to overall quality of life, have become the emerging outcome measures in cancer survivorship. Breast cancer formed 31.3 per cent of newly diagnosed cancer cases in Malaysian women in 2003-2005 is breast cancer (Lim, 2008), making it the commonest cancer among Malaysian women. Ethnic wise, it is highly prevalent amongst the Chinese (1:16), followed by the Indians (1:17) and Malays (1:28) (Lim, et al., 2008). In contrast to the west, whereby the age of onset is later at 70-80 years (Lim et al., 2008); the onset here is 50-59 years, i.e a period of critical occupational engagement and production.

For many cancer survivors in their 40-60 years old, there are many after-effects from the disease and its treatment that interfere with return to work. In addition, survivors are also at risk of becoming unemployed in the present economic climate and rising unemployment rate (Carlsen, et al., 2008; Ahn et al., 2009). Employed women with breast cancer face many challenges in their attempts to RTW during the recovery period (Maunsell et al., 1999). Worldwide, there is still a lack of attention and focus on RTW for breast cancer survivors (Tamminga, 2010), especially in resource-limited countries in Asia where the issue of survival takes precedence over all other quality of life issues. Most RTW studies have focused on people with physical disabilities and mental health disorders, but very few studies have been conducted on cancer survivors. Literature had shown that types of breast cancer treatment, residual of the disease, social demographic factors, psychological support from families and employment and self-efficacy had influence breast

*[1]Institute of Postgraduate Studies, [2]Department of Rehabilitation Medicine, [3]Department of Social Preventive Medicine, Faculty of Medicine, [4]Faculty of Languages and Linguistic, Department of Occupational Therapy, Kuala Lumpur Hospital, University of Malaya, Kuala Lumpur, Malaysia, *For correspondence: syloh@um.edu.my*

cancer survivors in return to work. Return-to-work may offer a therapeutic means for survivors to claim normality, a sign of wellbeing that the person can return to previous work. Preliminary evidence suggests it's an important rehabilitation goal with significant impact on quality of life (Myhren, 2010). Nevertheless, the limited evidence is not proportionate to the steep rise in cancer survivors and quality of life issues in cancer survivorship recently. There is currently no study being carried out on multi ethnic Malaysian women. Therefore, this study aims to explore the perception of barriers and facilitators to return to work, in a group of multi-ethnic women with breast cancer.

Materials and Methods

This study was approved by the Medical Research and Ethics Committee from University Malaya Medical Centre, and the Ministry Of Health Malaysia. The setting of the study was in two large public hospitals in Kuala Lumpur: - the University Malaya Medical Centre and the Kuala Lumpur Hospital. The pool of participants was recruited from the cancer registry lists from March 2008 to March 2011. The qualitative study via six homogeneous focus groups was stratified according to ethnic and return-to-work or non-return-to-work status. Qualitative methods have been noted to be especially useful when researcher needs to understand particular people, problem or situation in great depth and detail (Patton, 1990). This is especially useful since there is not much research conducted in this area on return to work among cancer survivors. There were three focus groups conducted with survivors who have successfully returned to work, and another three groups for those who did not return to work after completion of cancer treatment. Each of the three groups consisted of homogeneous ethnic grouping representing the Chinese, Indian and Malay survivors respectively. Inclusion criteria were women diagnosed with Stage 1-3 breast cancer, age between 18-60 years and have completed primary treatment. The participants were informed and screened for eligibility by an independent caller. The Snowball Technique (Patton, 1990; Lindlof, 1995) was used to increase participants. Participants were asked to choose their preferred language for discussion, and the moderator conducted the group using either English, Malay or Chinese (Mandarin) language. A list of consented participants was identified for each of the ethnically homogenous focus group, stratified according to RTW and non-RTW. Once a total of about 6-10 participants was reached for a group, text message were sent via mobile telephone to inform them of the time and venue for the focus group. The 6-12 members per group were in line with recommendation from experts (Lindlof, 1995; Krueger, 2008).

Data collection

The sessions were audio-taped with the permission from participants who were assured that the information provided will be treated with confidentiality and will be used only for research purpose. The focus groups were conducted using a focus guide below. All focus groups were conducted by a moderator and two assistants. The moderator facilitated the discussion, whilst the note-takers recorded brief notes and observations such as significant nonverbal behavior or group dynamics, to help inform the later transcriptions. Each focus group lasted approximately 2 hours of semi-structured discussion regarding the barriers and facilitators for return-to-work. The focus groups were both hand-recorded and audio-recorded and fully transcribed verbatim.

Focus group guide: The key questions in the RTW group were as follows: (i)Tell us about what encourages you to return to work? (ii) Tell us about your experience with employer/colleague? (iii) Anything else that you would like us to know/share to understand how to enable RTW.

The key questions in the non-RTW group were as follows: As all of you did not returned back to work; i) Tell us about what hinders you from returning to work? ii) Share with us any intention to RTW soon or find a new job for yourself, and why? iii)Anything else that you would like us to know/share to understand how to enable RTW.

Data analysis

Thematic analysis using constant-comparative method, and data management aided by in vivo-9 was carried out on the transcribed interviews from 40 women with breast cancer. Transcripts were checked against notes recorded by the assistant researcher to improve data reliability and trustworthiness.

Results

Out of a total of 251 telephone numbers in the registry, we managed to contact 230 women and 21 women had passed away according to family members who answered the calls. From the 230 patients (147 with employed status and 83 were unemployed); an initial list of potential 98 patients agrees to participate. Nevertheless, during the final calls, only 40 patients consented and they made-up the 6 focus groups which took place between June to August 2011. Each group consisted of at least 6-8 participants. Table 1 showed the characteristic of the return-to-work (RTW) group versus the non-return-to-work (NRTW) group. The age range for RTW and non-RTW were 21-54 years and 40-58 years respectively.

There were 12 themes that emerged from the participants' discussion on barriers (Figure 1A), and seven themes for facilitators to return to work (Figure 1B). These themes were regrouped into four broad categories: i) personal (age, sign and symptom of disease, negative thinking, myth, dressing and quality of life), ii) financial (receipt of compensation from the SOCSO), iii) environment (family restriction, friends and colleagues discourage) and, iv) work factors.

Barrriers for RTW

70 percent of the women in the non-RTW group have lost their job, nine of them resigned, four terminated with compensation, one terminated and, only 30 per cent still on medical leave and unpaid leave. The disease and treatment related factor was the main barrier among

Table 1. Characteristic of Return to Work Group versus Not Return to Work Group (n=20)

		Return-to-work N (%)	Non Return-to-work N (%)
Ethnic	Malay	6 (30%)	6 (30%)
	Chinese	8 (40%)	7 (35%)
	Indian	6 (30%)	7 (35%)
Age	Mean (std. dev.)	43.2 (9.6)	49.4 (4.7)
Marital status			
	Single	3 (15%)	2 (0%)
	Married	15 (75%)	13 (65%)
	Divorced/separated	2 (10%)	5 (25%)
Occupation status			
	Self-employed	1 (5%)	2 (10%)
	Government	5 (25%)	4 (20%)
	Private	14 (70%)	14 (70%)
Stay with			
	Alon	1 (5%)	1 (5%)
	Spouse, kids, parent	16 (80%)	15 (75%)
	Parent and bother /sister	3 (15%)	3 (15%)
	Friends	0	1 (5%)
Education level			
	No formal education	0	2 (10%)
	Primary school	0	6 (30%)
	Secondary school	10 (50%)	6 (30%)
	Tertiary	10 (50%)	6 (30%)
Physical Demand			
	Sedentary work	9 (45%)	9 (45%)
	Light weight	6 (30%)	6 (30%)
	Medium weight	5 (25%)	5 (25%)
Treatment			
	No treatment	2 (10%)	1 (5%)
	Surgery only	1 (5%)	2 (10%)
	surgery, radio, chemo and hormone	17(85%)	17 (85)
Work status			
	Full time work	17 (85%)	- -
	Part time work	3 (15%)	- -
	Medical certificate	- -	4 (20%)
	Unpaid leave	- -	2 (10%)
	Medical Board	- -	4 (20%)
	Terminated from work	- -	1 (5%)
	Resign/ retirement	- -	8 (40%)
Sick Leave			
	Range	(0-104 wks)	(12-104 week)
	Mean (std. dev.)	40.5 (3.62)	62.8 (4.30)

		Return to work (RTW)	Non - 'Return-to-work' (Non RTW)
Willingness to return to work			
	Yes	20(100%)	11 (55%)
	No	0	8 (40%)
	Not sure	0	1 (5%)
Return to work status			
	Same = employer+Job title+Job description	16 (80%)	- -
	Same employer+job title but difference job description	1 (5%)	- -
	Difference employer but same Job title+ Job description	3 (15%)	- -

all three ethnic groups especially India group. Not only disease related but also side effect of treatment, affected them physically, psychological and cognitively. Physical symptoms like tiredness or fatigue, pain, breathlessness reduces strength and stamina for work. "When I work I really have trouble with my left hand". "*I am physically tired; I was not able to walk long distance, and not able to monitor work because I noticed I was breathless during walking or going up a flight of stair.*"

Changing emotional states like depression, worrying

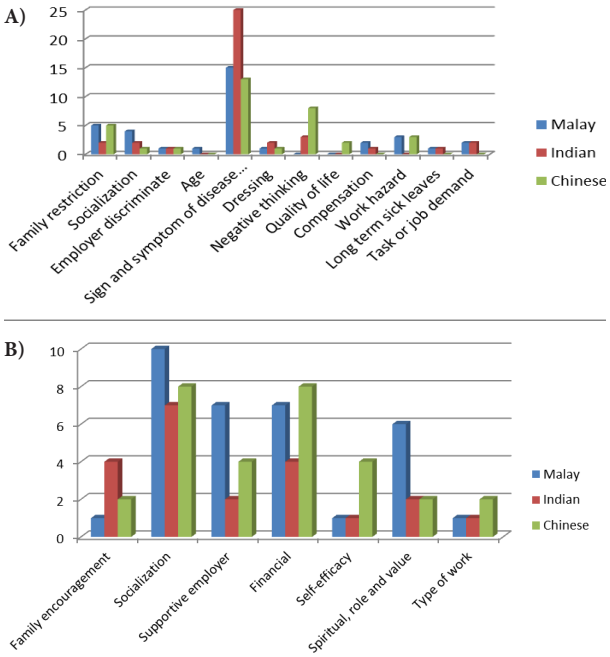

Figure 1. A) Barrier and B) Facilitator for Return-to-Work (n=40)

and frustrations lead to low frustration tolerance, poor decision making on RTW and consequently a lowered quality of life. "*I had worries and fears, I had always had these feeling which after a year-long, I realized I was also having tiredness and fatigue, and then I realized that I was having post-treatment Depression*". Others reported the key complain of cognitive impairments such as forgetfulness and slowness in thinking. For example, a participant informed that: "*I felt like I was always unable to think as well as I used to be able to, and to me, chemotherapy has been like some sort of netting that has covered my thinking skills, and the effect is ….. I cannot think. Oh! That includes...being forgetful, yes I always cannot remember things*."

Three participants are still being follow-up by their oncologists and as they continued treatment they find it hard to RTW. Thus, extended follow up appointments can also hinder return to work. To illustrates, one woman shared: "I need to go in for my physiotherapy and occupational therapy treatment weekly" Some women revealed that dressing for work is an obstacle for return to work because they need to pay more attention to their image and some need to change their wardrobe. One young woman shared: "In term of dressing, short sleeve and low-cuts are definitely not for us now…" Due to a lack of awareness on breast prosthesis, the need to wear the right brassier and clothing in order to obtain a '*symmetrical*' appearance has been a common utterance amongst these women (Loh and Yip, 2006). Several participants also hold unhealthy, faulty beliefs, such as cancer survivors should not eat out side food, with others, asserting that the costly organic food is a must for survivors. As one woman lamented, "Our food intake is not easy; we have our 'own categories' (food that cancer survivors can consumed) now." Other utterances related to side effect include …"Unable to carry heavy weight is a problem", which can clearly interfere with RTW

especially if carrying is part of their job descriptions. Other personal factors such as attitudes, beliefs and value were identified as in barriers "I don't want work, I think one of the reason I have breast cancer is because of stress at work." Therefore, they believed that stress causes breast cancer, and since return to work is stressful, they will end up with recurrences if they return to work. Ageing is also an obstacle as expressed by a participant. She asserts, "I'm easily tired because I'm old and therefore I will not want to take up any full time job".

Other participants think that they have work sufficiently during their life, and now, they should have time to rest, or do whatever they like. This reflects a decision making favoring quality of life issues. Another minority group of women uses cognitive-behavioral reasoning which calls for an acceptance of their current state, such that they had satisfaction in life and they should appreciate whatever they have right now. "*I will not go back to work as well, because I told myself to be contented with whatever I have now and happiness is the most important thing I valued now….so not to worry too much and/but to spend time to do more exercises…to live happily. Some time, when I felt bored, I will ask my children to bring my grandchildren to accompany me and that brings me much joy.*"

Environment factors such as restriction form family members to return to work were one of the strong reasons for who were not return to work, "*My husband and children are not allowing me to work, they said I had work long enough, they want me to rest*." Perceived discrimination by colleagues was also discouraging one of participant in return to work " *I am worry, shame and felt embers to walk cross the male colleagues." and some employer force participant to resign from work "My boss ask me to stop work (resign) he said after I recover from breast cancer, he will employ me again...*

Despite that, work related factors contributing to third important obstacles in decision to return to work. High physical work demand, exposure to dust, chemical and smoke demotivated the women to return to work. "*My work (printing) because of the explosion to chemicals such as mercury, this is bad for health." Greater responsibility had hinder participant "After some time, I started feel I have exhausted, because as a principle of a school the responsibility is great*." Six (out of 40 participants) applied for retirement gratuity due to the diagnosis which they viewed as a serious medical problem. "*I don't want to go back to work, I wanted to stay at home take care of my daughter, further more I had got my SOCSO compensation*." Long sick leaves prevent participants return to work early. Three out of nine participants took the maximum two-year medical sick leave. They choose to rest at home rather than return to work early. "I am entitling for two year medical leave, now already 9 month, I had completed my treatment, I enjoy staying at home, and I think I have work long enough, I need to rest now."

Facilitator for return-to-work (RTW)

Within the three groups on returned-to-work, there were 11 (55%) participants who still have not return to work but expressed willingness to work after their medical leave expires. These participants shared several reasons on why working would be advantageous to them. The commonness expressions were – to relief the sense of boredom at home, and a need for office-colleagues for socialization. Ethnic wise, opportunity for socialization, family encouragement, and financial independence was the most common reason for RTW in the Malay, Indian and Chinese group respectively.

"*…I wanted to go back to work because you know! … staying at home is bad, I'm so depressed, I want to meet my friends, when you go out at least... you'll feel better. Staying at home alone is very bad*."

"*I stayed at home for 1 ½ year. Most of the time I only think of my illness and nothing else, and after that my daughter and husband encouraged me to return to work*."

Financial gains were second common reason for the participants "I have commitments as my husband is unemployed." Furthermore, the participants expressed to be financially independent and did not want to rely on husband or family. "*I want to independent financially, never to burden other people, and to pay my own treatment fees, support my family, and travel overseas*." Among ethnic groups, financial-independence was mostly expressed among ethnic Chinese compared to Malay and Indian.

Work related such as employers supportive were the also favorite discuss in the group. Support from employers such as provide medical benefit, flexibility in working hour and job specification and understanding facilitated majority of participants return to work. Malay ethnic express employers supportive were higher among them. "*I am unable to lead the whole school, I am applying to ministry for transfer, thanks Allah, and I manage to get my transfer and was offered light duties, now I am more calm and certainly less stressed." "I am more motivated in my work now because my employer provides all medical benefit – they are supportive*."

Personal factors such as self-efficacy, spiritually, role and value also widely discuss. Participants enlighten their religion and spiritual belief "*I thanks god; I am a Christian, "I really believe, god is unity, you know, god wants all of us well, so god guide me*". Sense of roles in the family was the common expression among Malay ethnic compare with Chinese and Indian. An example of this expression is, "*I feel what I can contribute to this life is teaching my student, that is what I can do for this life …*" However, in the Chinese group, it seemed that a high RTW self-efficacy was a good facilitator to RTW. An example being: "*I know a few friends (cancer survivors) from this hospital, they are still working. Yes, breast cancer patients are not necessary unable to work. Some of my friends, who have far worst disease-conditions than mine, are still working; thus I am sure I can work too…*".

Discussion

The findings showed that breast cancer survivors encountered numerous RTW-related issues, some of which have been reported in the literature. Job loss, demotion and unwanted change in task (Elizabeth et al., 1999) are also found in our study. Park et al. (2008) reported that in the newly diagnosed in Korea (surveyed for a period over 69

to 72 months of follow-up) - 47 percent cancer patients had lost their job in their first 3 months, and 30.5 percent were re-employed in the second three month. Eversley and Estrin (2001) reported that 40 percent of their sample changed job, 17 percent were terminated or laid off, and 29 percent felt that they were harassed at their jobs after their breast surgery. Our study found several emerging themes on RTW which were regrouped into four categories.

Environment factors had the greater influence in return to work, the main reasons and motivation they wanted to work was environment; value of social interaction amongst friends and colleagues to get it out of bore, encouragement, boost morale of breast cancer survivor to continue their working live. Amongst the Malay ethnic, the support from family, friends were always expressed more often compare with other ethnicity. Malays' RTW seemed to be facilitated by social interaction. In contrast family restrictions were hindering some participant from return to work.

The personal interpretation of the treatment and the personal experience of the effect of treatment exert a strong influence on the survivor's RTW. These factors served as key barriers which impacted all the women, regardless of ethnicity, whereby their physical and psychosocial wellbeing suffered as a result of the diagnosis and its treatment-related after-effects. Women shared that the physical symptoms like fatigue, pain; breathlessness reduces their strength and overall stamina for work. Psychological sequels like depression, anxieties, and frustration makes the participants emotionally sensitive. Many women also complained of cognitive impairments like forgetfulness, sluggish thinking – a phenomena which has been reported by (Biegler et al., 2009). The after-effects of breast cancer treatment were the most frequently expressed barriers to RTW. Similar findings had been widely reported by researchers (Aina et al., 2007; 2009; Balak et al., 2008; Hassett et al., 2009). These signs and symptoms of breast cancer treatment will lead to long sick leave among breast cancer patients (Taskila, 2007) other personal factors such as attitudes, beliefs and values also influence decision-making for RTW. It is likely that breast cancer survivors may suffered from low self-esteem with a general lack of confidence in RTW, and several women from the non-RTW groups offered that they may opt for part-time work because they were not confident for full time work. Indeed, self-confidence and specific RTW self –efficacy have been shown to influence breast cancer survivors' decision in return to work (Labriola et al., 2007; Lagerveld et al., 2010). For others, even dressing for work can be an issue in returning to work. Women were sharing that they were not able to dress properly in a more '*symmetrical*' body image presentation, and their self-conscious awareness erodes their self-esteem especially in the younger women. Different social demographics factors such as older age can influence decision for RTW (Eversley and Estrin, 2001; Fantoni et al., 2009; Hassett et al., 2009). In addition, psychological problem was common such as depression, anxiety and stress. However a few studies that have focused on the effects of psychosocial factors at work and suggested that social support from occupational health services, and workplace accommodations is needed to help cancer survivors' returned to work (Taskila and Lindbohm, 2007). Quality-of-life related issues over mere survival from cancer have now take precedence with better drugs an overall management. However it can also be a barrier for some women and hinders early return to work. Some survivors expressed that being alive or surviving cancer, makes them revalue life activities and redirected their attention towards living a better life, such as more enjoyment and family activities (Maunsell et al., 2004), and shunned RTW. Multiple myths held by survivors have been reported (Loh et al., 2007) and this included belief like they must not eat outside food, and must stay away from 'cancer causing toxins or environment including work stress. These myths can affect the decision to RTW since some women find it inconvenient to buy food and need to specially prepare their food from home, or increase fear of recurrent from being exposed to toxins.

With financial issues, most breast cancer survivors choose to return to work out of necessity and not choice because of their current financial needs and/or their family commitments. This reason is highly expressed especially among Chinese. The Social Security Organization (SOCSO) is the Malaysian government department responsible for administering the employment injury insurance scheme, whereby patients are entitled to claim compensation if they suffer any degree of loss of ability to work. Even this privilege becomes a barrier for RTW as some survivors goes all out to obtain this compensations so that they do not have to return to their previous work. Likewise, compensation from insurance scheme is a useful source which has helps many insured-survivors financially during the critical period of unemployment. Unfortunately, it is also used by some survivors who are all out to avoid return-to-work. These women proactively strategized to convince their employer and their doctors to concur with them so that they can be medically-boarded out from work.

Type of work such as high physical demand, fear exposure to hazard (chemical, dust and smoke) at work, delays and hinders attempts to return-to-work. In contrast, having supportive employers who provide time flexibility, accommodated participants' limitation, provide financial assistance and support can definitely promote survivors' return-to-work. Other studies have concurred that psychological support from employment can contribute towards early RTW (Johnsson, et al., 2010). A high 87 percent of cancer survivor with poor support from colleagues ended with a delayed return to work (Fantoni et al., 2009). In terms of medical sick leaves, survivors from private sectors are entitled for paid-leave for not more than 60 days in each calendar year. In a sharp contrast, survivors who worked in public or governmental sectors have up to 1-2 years paid-leave. There is a need to determine what a good cut-off point in terms of ideal period for is paid-leave, be it in the private or public sectors. There must be a good reasonable range to accommodate individual differences, but with coverage for most workers. Overall, employers have a pivotal role in breast cancer patients' (n=416 employed women; odds ratio=2.2; 95%CI, 1.03-4.8) successful return to work (Bouknight, 2006)

This is the first multiethnic study on return to work

with participants from two large public hospitals in Kuala Lumpur. Rigorous procedure was ensured to obtain a better representation of the three large ethnic groups during recruitment. The process to ensure data trustworthiness was upheld with several steps; i) moderator summarized key points discussed within the group, whilst another assistant record it on the flip chart. This allows participants to correct, add on or to refute the key information. ii) All ethnic-homogeneous groups had a dialect-specialist facilitator/assistant to ensure better understanding of the group expressions. The transcriptions were carried out by the dialect-specialist assistants. In particular, the audiotape was interpreted with the assistance of an Indian transcriber who understands the Tamil language, together with the Indian moderator.

There were at least three limitations in the study. Firstly, poor recruitment which was largely due to the fact that Asian cancer survivors tend to shy away from research-related activities and cancer being viewed as a taboo-subject (Loh et al., 2007) makes it more difficult to draw people to participate. Perhaps RTW is no longer an issue for survivors who RTW, but the reason for refusal included working commitment (even though groups were held on weekends), priority for family commitments, difficulty with transportation and psychosocial related issue where by some were still unable to accept the illness and some were not ready to talk about it, or do not want to be reminded of the 'traumatic' diagnosis. Many of those who successfully returned to work refused to participate in the study. We did observe the women were not forthcoming and, actually move away upon knowing that the researcher was trying to recruit them for study. Secondly, language was also an issue for the multiethnic patients. In the homogeneous Indian group, most Indian women pre-selected English as their choice of communication medium for the discussion. However, during the session, the participants communicated with each other in the Tamil language and it was a bit difficult for the moderator to follow their discussion. Thirdly, this study did not differentiate how long survivors returned to work, be it 1 day or I week or 1 year, and warrants a follow up longitudinally. The findings have implications for further studies and will be used for the development of a 'quantitative RTW tool' to help identify factors related to re-entry into labor. In addition, it informs Occupational Therapists in designing programs to facilitate RTW, and for clinical practice guidelines on RTW. With an increasing rate of survivors, occupational therapists, as a potent contributor towards healthy survivorship, need to be more engaged in cancer survivorship research and care (Vockins, 2004). Additional research is needed to identify prognostic factors that can guide clinical or workplace efforts to restore cancer survivors to their desired level of occupational functioning for economic productivity and wellbeing.

In conclusion, three quarter of breast cancer survivors expressed the desire to return to work, but they faced numerous barriers ranging from person, environment and work related. These barriers directly and/or interactively contribute to a delay in RTW. The main personal barrier was problem with physical limitation causes by disease and treatment. Family restriction and perceived employers' discrimination were key environment barriers; having social, financial independence and employers' support are key facilitators for return-to-work. Between ethnic groups, financial-independence was mostly expressed among ethnic Chinese (compared to Malay and Indian), whilst perceived socialization was a prominent facilitator theme among Malay. However, perceived work-hazard, social-security compensation, issues with home-cooked food, and clothing difficulties were common obstacles. Return to work is an important rehabilitation goal from the perspective of occupational therapy intervention. Provision of RTW information and intervention are needed to facilitate early return to work. There is a need to ensure women have a choice about RTW, and those who want to return to work can be referred for early intervention whilst, those who do not, can be referred to therapist for motivational interviewing. Client-centered occupational therapy can provide the needed individual intervention to address specific obstacles related to a broad range of dysfunction in the physical, social and/or psychological domain, and enhance RTW for cancer survivors.

Acknowledgements

Gratitude to all the participants, Halimatun Saadiah and Phae Gee, and the Department of Occupational Therapy, Kuala Lumpur. The study is funded by the UMRG, University Malaya.

References

Ahn E, Cho J, Shin DW, et al (2009). Impact of breast cancer diagnosis and treatment on work-related life and factors affecting them. *Breast Cancer Res and Treatment*, **116**, 609-16.

Balak F, Roelen C, Koopmans P, Berge E, Groothoff JW (2008). Return to work after early stage breast cancer: a cohort study into the effects of treatment and cancer related symptoms. *J Occupational Rehabilitation*, **18**, 267-72.

Biegler KA, Chaoul MA, Cohen L (2009). Cancer, cognitive impairment, and meditation. *Acta Oncologica*, **48**, 18-26.

Bouknight RR, Bradley CJ, Luo Z (2006). Correlates of return to work for breast cancer survivors. *J Clin Oncol*, **24**, 345-53

Bowen GA (2008). Naturalistic inquiry and the saturation concept: a research note. *Glenn A Bowen*, **8**, 137-52.

Carlsen K, Dalton SO, Diderichsen F, Johansen C (2008). Risk for unemployment of cancer survivors: A Danish cohort study. *Eur J Cancer*, **44**, 1866-74.

Carlsen K, Dalton SO, Frederiksen K, Diderichsen F, Johansen C (2008). Cancer and the risk for taking early retirement pension: a danish cohort study. *Scandinavian J Public Hlth*, **36**, 117-25.

Elizabeth M, Brisson C, Dubois L, Lauzier S, Fraser A (1999). Work problem after breast cancer : an exploratory qualitative. *Psychooncology*, **6**, 467-73.

Eversley R, Estrin D (2001). Return to work after breast cancer surgery. Women's Cancer Resource Center.

Fantoni SQ, Peugniez C, Duhamel A, et al (2009). Factors related to return to work by women with breast cancer in Nothern France. *J Occupational Rehabilitation*, **20**, 49-58.

Hassett MJ, Malley JO, Keating N (2009). Factors influencing changes in women diognosed with breast cancer. Cancer.

Johnsson A, Fornander T, Olsson M, et al (2007). Factors associated with return to work after breast cancer treatment. *Acta Oncologica*, 46, 90-6.

Johnsson A, Fornander T, Rutqvist LE, et al (2009). Predictors of return to work ten months after primary breast cancer surgery. *Acta Oncologica*, **48**, 93-8.

Johnsson A, Fornander T, Rutqvist LE, Olsson M (2010). Factors influencing return to work: a narrative study of women treated for breast cancer. *Eur J Cancer Care*, **19**, 317-23.

Krueger JI (2008). Rationality and social responsiity; Essays in Honor of Robyn Mason Dawes (Modern Pioneers in Psychological Science: An APS-Psychology Press Series).

Labour Force Malaysia (2011). Principal Statistics of Labour Force Malaysia 2010. Vol. 02/2011, p1. Retrived on Aug 2012 from - http://www.statistics.gov.my/portal/images/stories/files/LatestReleases/employment/Labour_Force_Indicator_Malaysia_Sept2010BI.pdf.

Labriola M, Lund T, Christensen KB, et al (2007). Does self-efficacy predict return-to-work after sickness absence? A prospective study among 930 employees with sickness absence for three weeks or more. *Assessment and Rehabilitation*, **29**, 233-8.

Lagerveld SE, Blonk RWB, Brenninkmeijer V, Schaufeli WB (2010). Return to work among employees with mental health problems: development and validation of a self-efficacy questionnaire. *Work and Stress*, **24**, 359-75

Lim GCC, Sanjay R, Yahaya H (2008). Cancer Incidence in Peninsular Malaysia 2003-2005 In M. The Third Report of the National Cancer Registry, Ministry of Health (Ed.): National Cancer Registry.

Lindlof TR (1995). Qualitative communication research methods: Sage Publications.

Loh SY, Yip Ch (2006). Breast cacer as a chronic illness; implication for rehabilitation and medical education. *J University of Malaya Med Centre*, **9**, 3-11.

Loh SY, Packer T, Yip Ch, Low WY (2007). Perceived barriers to self-management in Malaysian women with breast cancer. *Asia Pac J Public Hlth*, **19**, 52-7.

Maunsell E, Brisson C, Dubois L, Lauzier S, Fraser A (1999). Work problems after breast cancer: an exploratory qualitative study. *Psycho-Oncology*, **8**, 467-73.

Maunsell E, Drolet M, Brisson J, et al (2004). Work situation after breast cancer: result from population based study. *National Cancer Institute*, **96**, 1813-22.

Myhren H, Ekeberg O, Stokland O (2010). Health-related quality of life and return to work after critical illness in general intensive care unit patients: A 1-year follow-up study. *Critical Care Med*, **38**, 1554-61.

Nenty HJ (2009). Writing a quantitative research thesis. *Int J Edu Sci*, **1**, 19-32.

Park JH, Park EC, Park JH, Kim SG, Lee SY. (2008). Job loss and re-employment of cancer patients in Korean employees: A nationwide retrospective cohort study. *J Clinical Oncology*, **26**, 1302-9

Patton MQ (1990). Qualitative Evaluation and Research Methods. Newbury park,CA: SAGE Publications.

Steiner JF, Nowels CT, Main DS (2010). Returning to work after cancer: quantitative studies and prototypical narratives. *Psycho-Oncology*, **19**, 115-24.

Tamminga SJ, de Boer A, Verbeek JH, Frings-Dresen MH (2010). Return-to-work interventions integrated into cancer care: a systematic review. *Occupational and Environmental Med*, **67**, 639-48.

Taskila T, Lindbohm ML (2007). Factors affecting cancer survivors' employment and work ability. *Acta Oncologica*, **46**, 446-51.

Taskila T, Martikainen R, Hietanen P, Lindbohm ML (2007). Comparative study of work ability between cancer survivors and their referents. *Eur J Cancer*, **43**, 914-20

Vockins H (2004). Occupational therapy intervention with patient with breast cancer : a survay. *Eur J Cancer Care*, **13**, 45-52.

Whittemore R, Chase SK, Mandle CL (2001). Validity in qualitave research. *Qualitative Hlth Res*, **11**, 522-36.