Med & Health Dec 2019; 14(2): 189-202 https://doi.org/10.17576/MH.2019.1402.17

ORIGINAL ARTICLE

A Cross-Sectional Survey of Employment Status in Patients with Schizophrenia and its Association with Caregivers' Burden and Quality of Life

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ABSTRAK

Pekerjaan di kalangan pesakit dengan skizofrenia mempengaruhi penyembuhan mereka secara positif. Di dalam peranan sokongan mereka, beban dan kualiti kehidupan penjaga pesakit turut dipengaruhi oleh status pekerjaan pesakit. Kajian ini bertujuan untuk meneliti hubungan di antara status pekerjaan pesakit skizofrenia dengan beban dan kualiti hidup penjaga mereka. Ini merupakan satu kajian keratan rentas di kalangan penjaga utama bagi pesakit yang memenuhi kriteria diagnostik DSM-IV-TR untuk skizofrenia dan berada di bawah rawatan susulan pesakit luar atau rawatan komuniti di Hospital Bahagia Ulu Kinta. Data sosiodemografik, termasuk status pekerjaan pesaki telah dikumpulkan. Soal selidik Burden on Family Interview Schedule (BFS) dan 36-Item Short Form (SF-36) masing-masing digunakan untuk menentukan beban dan kualiti hidup penjaga. Seramai 201 penjaga utama pesakit skizofrenia terlibat dalam kajian ini. Beban penjaga terutamanya dialami dalam aspek kewangan dan rutin aktiviti keluarga. Terdapat hubungan yang signifikan di antara status pekerjaan pesakit ($p<0.001$), gaji ($p<0.001$), jangkamasa pekerjaan ($p<0.001$), dan jenis pekerjaan ($p<0.001$) dengan tahap beban penjaga. Penjaga bagi pesakit yang bekerja juga mempunyai kualiti hidup yang lebih baik dari segi kesihatan mental dengan skor komponen mental yang lebih tinggi untuk SF-36 (skor purata: 51.83) berbanding dengan kumpulan yang tidak bekerja (skor purata: 47.99, $p<0.001$). Program sokongan pekerjaan untuk pesakit skizofrenia juga memanfaatkan penjaga mereka dengan mengurangkan beban dan meningkatkan kualiti hidup mereka.

Kata kunci: *kualiti hidup, pekerjaan, penjaga, skizofrenia*

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ABSTRACT

Employment among patients with schizophrenia is known to positively influence patients' recovery. In their crucial supporting role for patients, caregivers' burden of care and quality of life may also be influenced by the employment status of patients. This study aimed to investigate the association between employment among patients with schizophrenia and burden and quality of life (QOL) of their caregivers. It was a cross-sectional survey among the primary caregivers of patients meeting DSM-IV-TR's diagnostic criteria for schizophrenia who were under outpatient or community care at Hospital Bahagia Ulu Kinta. Socio-demographic data, including patients' employment status, were collected. The Burden on Family Interview Schedule (BFS) and the 36-Item Short Form (SF-36) questionnaires were used to evaluate caregiver burden and quality of life, respectively. Altogether, 201 primary caregivers of patients with schizophrenia participated. Most caregiver burden was experienced in the aspects of finance and routine family activities. There was significant association between patient employment status ($p<0.001$), salary ($p<0.001$), duration of employment ($p<0.001$), and type of employment ($p<0.001$) with the level of caregiver burden. Caregivers of employed patients also had better QOL in the mental health aspect with significantly better mental component scores for SF-36 compared to the unemployed group (mean scores: 51.83 vs. 47.99, $p<0.001$). Supported employment programmes for patients with schizophrenia may also benefit their caregivers by reducing burden and improving quality of life.

Keywords: caregivers, employment, quality of life, schizophrenia

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INTRODUCTION

Schizophrenia is a chronic, debilitating mental disorder that affects emotions, cognition, movement and behavior (Lewis & Lieberman 2000). It is a major mental disorder that alters a person's life considerably. Many individuals with schizophrenia experience impairment in social functioning, which in turn causes significant distress to both themselves and their caregivers.

Employment has been repeatedly demonstrated to play an important role in patients' recovery from severe mental illnesses (SMIs), particularly schizophrenia (Midin et al. 2011). Supported employment is among the most important advances in vocational rehabilitation for patients with SMIs to have emerged since 1980s (Rogan & Hagner 1990) along with other new approaches in the field of community psychiatry, such as assertive community treatment (ACT) (Ahmad Nabil et al. 2014). In line with the Malaysian National Mental Health Policy's aims to improve general wellbeing and reduce disability caused by mental illness, employment has been recognized in Malaysia as a key area in assisting individuals to recover from SMIs.

Unfortunately, compared to their western counterparts, patients with schizophrenia in Malaysia facing unemployment are beset by additional challenges; among which the main issue is the lack of financial safety net. Mentally-ill individuals in Malaysia do not enjoy any form of insurance coverage for mental illness-related costs e.g. therapy, medications or hospitalizations, unlike some developed countries where insurance covers up to 50% of illnesses related to mental illness. Moreover, Malaysians with SMIs do not enjoy social security benefits or disability pensions.

Unemployment among patients with schizophrenia also causes increased financial burden on their caregivers as they would have to provide for all their basic needs (Yu et al. 2017). In Malaysia, the National Registry of Schizophrenia for 2003 and 2004 showed that about 50% of patients with schizophrenia were unemployed upon their first contact with psychiatric services, about 20% had never been employed and only 30% of the cohort had some form of jobs, with a mere 17% among them having fulltime employments (Aziz et al. 2008). It was again shown in a more recent study that only 20% of patients with schizophrenia in Malaysia were currently employed (Dahlan et al. 2014).

Following deinstitutionalization and the return of psychiatric care to the community, caregivers of patients with SMIs are expected to juggle between caregiving role on a long-term basis and maintenance of their own survival and livelihood. This added responsibility, which can often be a daunting task, may intensify the burden shouldered by caregivers, and in turn affect many facets of their lives, including quality of life (QOL) and mental well-being.

The phrase 'caregiver burden' has been coined by researchers to reflect the distress and hardship faced by caregivers (Schulze & Angermeyer 2003; Pai & Kapur 1981). A study by Zam Zam and colleagues (2011) found that caregivers of individuals with schizophrenia have inferior QOL. Compared to the general populace, caregivers of SMIs who experienced persistent and high level of distress were more likely to have lower QOL and face greater physical health risks. Mitsonis and colleagues (2012) found that among the strong predictors of distress were female sex of caregivers, duration of illness and positive and negative symptomatology. In most developing countries, it is also associated with caregiver economic liability (Addo et al. 2018).

Caregiver burden is linked to depression, anxiety and deteriorating coping skills (Miyashita et al. 2009; Ong et al. 2016). Caregivers of individuals with mental illness are often incapable of full-time employment as a result of the demands of looking after the patients, causing a decline in household income. The income loss and the financial strains of caring for mentally-ill individuals render these families vulnerable to poverty. Relatives who care for a mentally-ill family relative may also encounter considerable long-term stress due to the physical and psychological challenges involved in the role.

To date, while QOL of patients with schizophrenia has been studied in Malaysia (Mohd Badli et al. 2008), there is a dearth of research on the association between employment among patients with schizophrenia and the burden and QOL of their caregivers in the Malaysian context. The aim of the present study was to explore the link between patient employment and their caregiver burden and QOL in a group of people with schizophrenia in Malaysia.

MATERIALS AND METHODS

This was a cross-sectional study. It was carried out from 1st August 2013 until 30th November 2013 at Hospital Bahagia Ulu Kinta (HBUK), a tertiary mental institution located in Perak, Malaysia. The target population was all primary caregivers of people with clinically-stable schizophrenia who were under the care of the community psychiatry unit or the standard outpatient clinic in HBUK during the study period. The diagnosis of schizophrenia was confirmed through unstructured clinical interview by the first investigator according to the diagnostic criteria in the Diagnostic and Statistical Manual, 4th Edition Text Revision (DSM-IV-TR) (American Psychiatric Association 2000). A patient was defined as clinically stable when the Brief Psychiatric Rating Scale (BPRS) was less than 36.

To recruit study subjects, systematic sampling was done. Based on the Schizophrenia Registry at HBUK, all the patients from the outpatient clinic and the community psychiatric team were randomly selected to participate in the study according to pre-determined sampling scheme.

Primary caregivers in the target population were selected for the study through systematic sampling. The inclusion criteria for primary caregivers were age between 18 and 65 years, able to speak in English or Bahasa Melayu, able to give written informed consent and fulfill the definition of ‘primary caregiver’. Primary caregiver was defined as the individual belonging to the family system of the people with the illness who took care of and was responsible for them, and committed most of their time to the caring duties without receiving any financial remuneration (Dwyer et al. 1994). Caregivers who refused to give written consent, not proficient in either English or Bahasa Melayu, or suffered from serious, disabling illnesses (e.g. ischemic heart disease, renal failure and chronic obstructive lung disease) were excluded. Informed consent was taken prior to each interview and subjects’ confidentiality was ensured throughout the study.

A socio-demographic information sheet was used to record personal profile of caregivers and patients such as age, sex, race, marital status, educational level, employment, household income and other pertinent information.

Several instruments were used. The Burden on Family Interview Schedule (BFS) was designed by Pai and Kapur (1981) for assessing burden among family members of the mentally ill. Caregiver burden was assessed by 26 separate questions on various aspects along two components: objective burden and subjective burden. Objective burden encompasses aspects of finance, interference with routine family activities, leisure times, interactions, physical and mental health of others. A scale of 3 point was used to rate the degree of burden felt, i.e. 0 = 'no burden', 1 = 'moderate burden', and 2 = 'severe burden'. Level of burden was categorized as: (i) no burden, with a total of 0 score; (ii) minimal burden at 1-28; (iii) moderate at 29-56, and (iv) severe at 57-84 (Pai & Kapur 1981). The scale demonstrated satisfactory inter-rater reliability of 0.87 to 0.99. There was equally good validity and high level of agreement for total scores on each item as assessed by professional raters and patient relatives (Correlation coefficient=0.72).

The 36-Item Short Form (SF-36) is a questionnaire with 36 items to assess health-related QOL, functional health and well-being of the respondents. It consists of eight score profiles which are made up from physical functioning (10 items), physical role functioning (four items), emotional role functioning (three items), energy/fatigue (four items), emotional well-being (five items), social functioning (two items), pain (two items), and general health (five items). In this study, the eight subscales were combined into two summary measures, namely the physical (PCS) and mental (MCS) component summary scores. SF-36 was validated in the local context; Cronbach's alpha exceeded 0.70 levels for most items (Sararaks et al. 2001).

The BPRS was used to assess clinical stability of the patients. It is a clinician-based rating scale for illness severity that demonstrated good inter-rater reliability (Bech et al. 1993). The BPRS has been widely used in local studies for patients with schizophrenia (Ruzanna et al. 2010).

The collected data was analysed in the Statistic Package for Social Sciences (SPSS) software, version 19. The data set was cleaned for any errors prior to statistical analyses. Mean and standard deviation (SD) were used to describe continuous variables. Kolmogorov-Smirnov test was done to check for normality of the sample distribution; it was found that the data was normally distributed. Bivariate analyses were, with t-test applied for continuous data and chi-square test used for categorical data. All tests were two-tailed. Significance level (α) was predetermined at 0.05.

Ethical clearance and approval for the study was given by the Research Ethics Committee of Universiti Kebangsaan Malaysia Medical Centre and the Medical Research and Ethics Committee of the Ministry of Health Malaysia. Permission was also granted by the director of HBUK to implement this study at the site.

RESULTS

In total, 201 out of 261 sampled primary caregivers of individuals with schizophrenia were involved in the study. Figure 1 illustrates the reasons of non-participation. Table 1 describes the socio-demographic

Table 1: Socio-demographic characteristics of primary caregivers.

	Characteristics	**Frequency N= 201 (%)**
Sex	Male	81 (40.3)
	Female	120 (59.7)
Race	Malay	60 (29.9)
	Chinese	126 (62.7)
	Indian	15 (7.5)
Age (years)	18-25	5 (2.5)
	26-35	12 (6.0)
	36-45	31(15.4)
	45-55	47 (23.4)
	56-65	106 (52.7)
Marital Status	Single	23 (11.4)
	Married	134 (66.7)
	Divorced	2 (1.0)
	Widowed	42 (20.9)
Education	Nil	9 (4.5)
	Primary	81 (40.3)
	Secondary	94 (46.8)
	Tertiary	17 (8.5)
Relationship with patient	Spouse	34 (16.9)
	Parent	116 (57.7)
	Sibling	41 (20.4)
	Children	10 (5.0)
Employed	Yes	123 (61.2)
	No	78 (38.8)
Household income per month (RM)	<500	89 (44.3)
	500-1000	34 (16.9)
	1001-2000	33 (16.4)
	2001-3000	20 (10.0)
	>3000	25 (12.4)
Contact time with patient	<35 hours per week	100 (49.8)
	>35 hours per week	101 (50.2)

characteristics of the caregivers. Seven respondents declined to participate in the study due to time constraint as they were approached during their outpatient appointment. The age group that contained the highest numbers of caregivers was 56 to 65 years (52.7%). Female formed the majority (59.7%) of caregivers. Chinese were the biggest ethnic group (62.7%). Many of the primary caregivers were married (66.7%). More than half of the

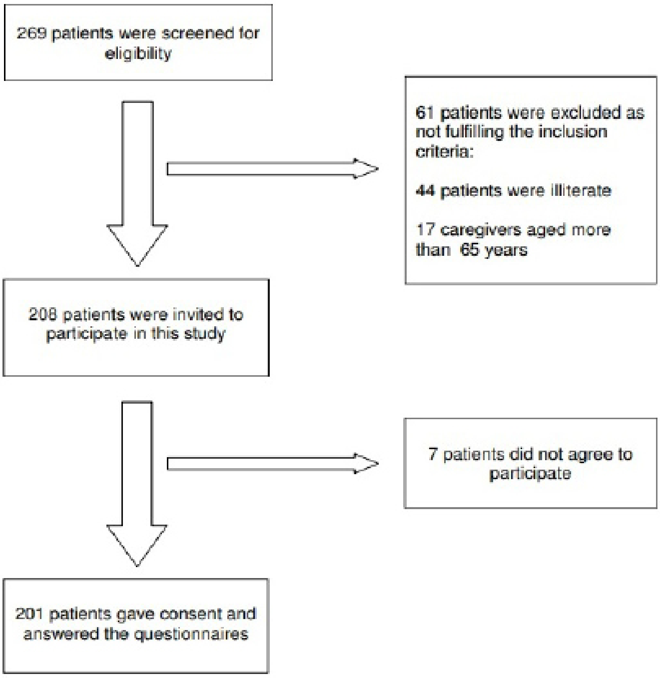

Figure 1: Summary of respondents' participation in the study.

participants (55.3%) had secondary and above level of education.

The majority of primary caregivers were parents (57.7%) caring for mentally-ill offspring. Among the caregivers, 61.2% were employed. Household income for 44.3% was <RM500.00 per month. Only 12.4% had a monthly income of RM3000.00 or above. Caregivers' contact time with patients was about evenly divided above and below the cut-off point of 35 hours/week.

Among the patients with schizophrenia under the care of the surveyed caregivers, 129 (64.2%) were unemployed. For those who were employed, almost all (n=68, 94.4%) were in full-time employment. One-third was involved in non-skilled manual jobs, followed by semi-skilled manual jobs (25.0%) and skilled jobs (20.8%). Many (n=56, 77.7%) earned an income of less than RM1,000.00/month.

Interview findings from the BFS identified financial burden and disruption of routine activities as the most reported caregiver burden. For financial burden, 48 caregivers (23.9%; 4 for employed patients (8.3%) and 44 for unemployed patients (91.7%)) indicated the loss of patient income as its cause, while 20 caregivers (10.0%; 5 for employed patients (25.0%) and 15 for unemployed patients (75.0%)) attributed it to the loss of income of family member. Regarding disruption of routine activities, 17.9% (4 for employed patients (11.1%) and 32 for unemployed patients (88.9%)) endorsed 'patient not going to school, work etc.' as the cause, while 21.9% attributed it to the patient not

Table 2. Association between caregivers' burden using the Burden on Family Interview Schedule with patients' employment status and employment-related factors from bivariate analyses.

	Caregiver's burden			**p-value**
	Nil **N (%)**	**Mild** **N (%)**	**Moderate** **N (%)**	
Employment				
Yes	24 (64.9)	37 (33.6)	11 (20.4)	p<0.001*
No	13 (10.2)	73 (66.4)	43 (79.6)	
Salary				
Nil	13 (10.1)	73 (56.6)	43 (33.3)	p<0.001*
<RM500	6 (20.0)	16 (53.3)	8 (26.7)	
RM501-1000	10 (38.5)	15 (57.7)	1 (3.8)	
RM1001-1500	3 (75.0)	1 (25.0)	0 (0.0)	
>RM1500	5 (41.7)	5 (41.7)	2 (16.7)	
Duration of employment				
Nil	13 (10.1)	73 (56.6)	43 (33.3)	p<0.001*
<1 month	0 (0.0)	6 (54.5)	5 (45.6)	
1 month-6months	4 (20.0)	16 (80.0)	0 (0.0)	
>6 months	20 (48.8)	15 (36.6)	6 (14.6)	
Type of employment				
Nil	13 (10.1)	73 (56.6)	43 (33.3)	p<0.001*
Part-time	0 (0.0)	3 (75.0)	1 (25.0)	
Full-time	24 (35.3)	34 (50.0)	10 (14.7)	

*Statistically significant

helping in household activities (7 for employed patients (15.9%) versus 37 for unemployed patients (84.1%)).

For the categories of caregiver burden, 37 caregivers (18.4%) reported no burden, 110 (54.7%) reported mild burden, and 54 (26.9%), moderate burden. None of the survey respondents reported severe caregiver burden. Regarding the measurement of QOL based on the SF-16, the mean PCS score for the study sample was 52.75 (Standard deviation (SD)=4.73), while the mean MCS score was 49.37 (SD=4.43).

Table 2 showed the association between factors related to patients' employment and primary caregiver burden from bivariate analyses. It was shown that caregivers of unemployed patients experienced considerably greater degrees of burden compared to caregivers of employed patients (Figure 2). There were also significant association between salary category, duration of employment, and type of employment with level of caregiver burden. Higher salary (RM500.00 and above, compared to <RM500.00 and no income) and full-time employment were associated with lower caregiver burden, while the biggest percentage

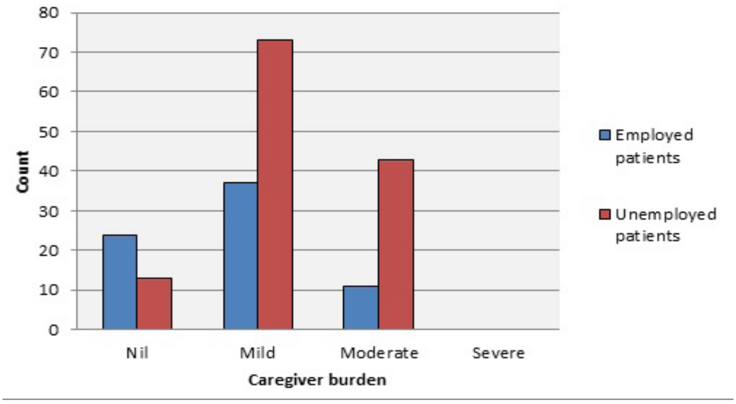

Figure 2: Categories of primary caregiver burden of the study sample using the BFS according to the patients' employment status.

of moderate-level burden was observed for caregivers of patients with short-term employment lasting up to a month compared to other durations of employment.

The mean MCS and PCS scores for the primary caregivers of employed and unemployed patients were displayed in Table 3. While the between-group difference in the PCS scores was insignificant, primary caregivers of patients in the employed group had significantly higher scores for MCS (mean scores: 51.83 vs. 47.99, $p<0.001$), indicating better mental health status.

DISCUSSION

In this study, the greatest sources of caregiver burden were related to finance and routine family activities. These findings were different from previous research. A study by Zahiruddin and Salleh (2005) showed that the largest objective burden were treatment costs, which affected more than a third of the caregivers. This discrepancy may be explained by the difference in study settings. While treatment was provided free in the current study setting, it was chargeable in the earlier study. Furthermore, caregivers in this study mostly came from low-income group, making overall financial condition an important predictor of burden for them. Indeed, other studies have also found that financial problems were

Table 3: Association between patients' employment and primary caregivers' QOL using SF-36 (N=201). Abbreviations: PCS, physical component summary; MCS, mental component summary.

	Employed Mean (SD)	**Unemployed Mean (SD)**	**p-value**
PCS	53.39 (5.61)	52.40 (4.15)	0.160
MCS	51.83 (4.87)	47.99 (4.17)	<0.001*

*Statistically significant

among the highest objective burden experienced by caregivers (Yu et al. 2017; Addo et al. 2018). Financial difficulties faced by caregivers may be contributed by the caregivers assuming sick family members' responsibilities, the length of time taking up in caregiving, particularly in attending to the ill relatives' behavioural disturbances, and also missed work.

The study by Zahiruddin and Salleh (2005) also found high level (40%) of severe subjective burden among primary caregivers, whereas in the current study caregivers showed no severe subjective burden. This could be partially due to the fact that only patients with less severe symptoms (BPRS score<36) were included in this study. Different ethnic composition in study samples is another possible reason, as the study by Zahiruddin and Salleh (2005) focused mainly on Malay caregivers, while our current study involved a majority of Chinese caregivers, keeping in mind that cultural differences may influence individuals' readiness in expressing subjective feelings.

On the other hand, it is possible that caregivers of patients with chronic debilitating disorders in the Malaysian context are able to come to terms with the condition, resulting to lessened burden over time. In a study by Razali and colleagues (2011) on burden of care among a Malay-predominant group of adults caring for patients with Parkinson's disease, it was found that as the illness progressed, the caregivers were capable of making lifestyle adjustments accordingly. At the same time, the sense of filial piety that they had towards their own relatives helped to lessen their burden of care. Traditional societal norms and cultural values can thus serve as strong psychological buttresses for caregivers of patients with SMIs who are dealing with considerable burden.

The findings of this study suggest that employment of patients with schizophrenia not only benefitted the patient but also their caregivers. When the burden of care among primary caregivers was compared between the employed and unemployed groups, it is noted that patient employment was strongly associated with lesser caregiver burden e.g. financial burden for loss of patient's income dropped from 91.7% to 8.3%. It is therefore important to reduce caregiver burden in order to prevent burnout among caregivers. Strategies that address this issue should be implemented. Among the most described are family intervention programme (Schulze & Angermeyer 2003), psychoeducation (Chan 2011; Magliano et al. 2005) and rehabilitation (Yeh et al. 2011). Rehabilitation programmes seek to improve the functionality of patients. Specifically, the supported employment approach (Bond et al. 2001) may help to reduce caregiver burden. Patients who are able to work are encouraged to seek jobs and function as early into the treatment as possible.

Studies have shown greater satisfaction among caregivers when patient can function independently and are capable of working or earning an income (Perlick et al. 2006; Möller-Leimkühler & Wiesheu 2012; Kulhara et al. 2012). Being employed would enable the patient to receive salaries and benefits which may allow greater independence and social mobility (Wehman et al. 1998). A meta-analysis of randomised controlled trials (Frederick & Vander Weele 2019) showed that people undergoing supported employment enjoyed improved vocational outcomes such as increased income compared to those who were not working, besides having better QOL and mental health. In time, their dependence to employment support would also diminish.

Given all the benefits of permanent, full-time patient employment, it is noteworthy that caregiver burden was actually higher for patients in short-term employment up to a month. This finding highlights the fact that the initial period of employment can be highly stressful not only for the patient, but also their caregivers, as patient employment may demand high level of support from caregivers, for instance in transport needs and adjustment in daily routines. Hence, dedicated rehabilitation service in the form of supported employment by professional staff will undoubtedly help to relieve pressure on caregivers during this critical period.

Majority of the studies show that the caregivers of the mentally ill scored low on QOL. For instance, a study in Hong Kong found that caregivers of patients with mental illness had significantly poorer QOL compared to other Chinese population (Wong et al. 2012). The study findings indicate that household income and physical health are the best predictors for QOL for these Chinese caregivers. In our study with a Chinese-majority sample, our results are similar to Wong et al. that household income is an important predictor of QOL (Wong et al. 2012).

Evidence suggests that physical, emotional and economic difficulties negatively impact QOL of caregivers due to a number of unmet needs, including restoration of patients' family roles and social functioning, relief of financial burden and increase of spare time (Caqueo-Urízar et al. 2009). Our study further supports the notion that patient employment is able to lessen caregivers' financial burden, especially when patients were employed full-time at a higher pay i.e. in the competitive market.

Since preexisting research findings seem to suggest that care giving burdens are consistently linked to mental ill-health and poor QOL among caregivers, we hypothesised in this study that patient employment would improve QOL of caregivers by reducing their burden, and our results demonstrated significant association between patient employment and the caregiver mental component score for QOL. The Hong Kong study cited earlier showed that among caregivers for relatives with schizophrenia, better physical health and higher household income can lead to better QOL (Wong et al. 2012). By increasing family household income through patient employment, caregivers' psychological distress can be considerably reduced. Moreover, patient employment might also decrease the need for caregivers to prolong working hours in order to compensate for the loss of income due to the patient's illness, consequently increase leisure time and improve QOL (Cheah et al. 1996).

By encouraging patient employment, contact time with caregivers can be cut down. The classic study by Vaughn and Leff (1976) showed that contact time of above 35 hours a week increases patients' relapse rate. Moreover, caregivers with more contact time with their family members with mental illness are associated with higher burden and poorer QOL (Wong et al. 2012; Alzahrani et al. 2017). Therefore, through reduction of contact time, patient employment not only has positive impact on patient outcomes, but also contributes to improvement of caregiver's QOL.

In order to promote employment among patients with schizophrenia, besides the involvement of a well-resourced supported employment programme, pharmacotherapy also plays an important role. Antipsychotics are not only effective for symptom control (Leucht et al. 2013) but also contribute to improvement of patients' QOL, for instance in sexual functions (Adam et al. 2018). Proper combination of antipsychotic treatment, including both typical and atypical agents, with evidence-based approaches in psychiatric rehabilitation, such as supported employment, can lead to better overall functional improvement in patients (Bond et al. 2004). Therefore, the need for early treatment with continuous efforts to ensure treatment adherence, as well as consideration of long-acting injections (LAIs), cannot be over emphasized.

There are several limitations to this study. Participants were taken only from one psychiatric hospital. Majority of them in this study were of Chinese descent, which did not closely reflect the general ethnic composition in Malaysia. Geographical constraint and atypical ethnic composition might have limited the generalizability of these findings to the entire Malaysian population. The inability to administer the study instruments in languages other than English and Bahasa Melayu could also have affected participants with poorer command of these languages, reducing the reliability of their responses. Moreover, several confounders such as life stressors and number of dependents in the family, comorbid problems, duration of untreated illness and level of remission symptoms were not included in this study.

CONCLUSION

In the present study, the most reported caregiver burden was in terms of finance and disruption of routine activities, but for caregivers of employed patients, burden was at a significant lower level compared to unemployed patients. These caregivers also had better QOL, especially in the mental health aspect. Lesser caregiver burden was associated with full-time patient employment and higher salary. Increased caregiver burden at early period of patient employment highlights the need for support in this situation. These findings provide preliminary evidence to support implementation of effective work rehabilitation programmes for patients with schizophrenia, as they would not only benefit patients but also their caregivers.

ACKNOWLEDGEMENT

The authors would like to express their gratitude to the Director of Hospital Bahagia Ulu Kinta for her support. The authors also express their gratitude to Dr. Sim Su Tein for her assistance in manuscript writing.

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Received: 23 May 2019
Accepted: 25 Sept 2019