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ORIGINAL ARTICLE

Self-Perceived Stigma and its Effect on Quality of Life among Malaysians Living with Human Immunodeficiency Virus

NADIA AB[1], LEELAVATHI M[1], NARUL AIDA S[2], DIANA M[3]

[1]Department of Family Medicine, [3]Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia.
[2]Klinik Kesihatan Tanglin, Jalan Cenderasari, 50590, Kuala Lumpur, Malaysia.

ABSTRAK

Penularan virus 'Human Immunodefiency' (HIV) merupakan beban kesihatan yang semakin meningkat di Malaysia. Stigma yang berkaitan dengan HIV dan kesannya terhadap kualiti kehidupan (QOL) pesakit HIV (PLHIV) masih kurang dikenalpasti. Tujuan kajian ini dijalankan adalah untuk meneliti swa-persepsi dan stigma di kalangan pesakit HIV dan pengaruhnya ke atas kualiti kehidupan mereka. Data dikumpulkan dengan menggunakan soal-selidik 'HIV Stigma' dan 'WHOQOL HIV BREF'. Kajian ini mendapati bahawa stigma yang dialami oleh pesakit HIV adalah tinggi (min ± SD; 103.37 ± 18.14). Kebanyakan peserta bimbang untuk mendedahkan status penyakit mereka, manakala pengalaman disisihkan disebabkan oleh penyakit HIV adalah yang paling kurang dialami oleh pesakit HIV. Secara keseluruhan, kualiti hidup pesakit HIV adalah rendah dan aspek yang paling terjejas adalah dalam hubungan sosial (min ± SD; 12.72 ± 3.59). Walau bagaimanapun, penyakit HIV tidak menjejaskan keupayaan mereka untuk melakukan aktiviti harian (min ± SD; 14.48 ± 2.91). Pesakit HIV yang melaporkan aspek kerohanian yang tinggi, didapati kurang mengalami swa-persepsi negatif. (r = -0.54). Ini adalah ciri unik bagi pesakit HIV yang mencadangkan bahawa aspek kerohanian dapat meningkatkan keyakinan diri mereka. Kesimpulannya, stigma masih merupakan isu yang penting di kalangan pesakit HIV. Klinik-klinik primer dapat memberi peluang rawatan yang menyeluruh dengan memudahkan integrasi di antara pihak kaunselor, pakar agama, keluarga dan persatuan bukan kerajaan dan sekaligus membantu proses rawatan secara keseluruhan.

Kata kunci: HIV, kualiti hidup, stigma sosial

Address for correspondence and reprint requests: Nadia Abdul Bari. Department of Family Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000, Cheras, Kuala Lumpur, Malaysia. Tel: +603-91459475 Fax: +603-91456680 E-mail: nadia_nini6@hotmail.com

ABSTRACT

Human Immunodeficiency Virus (HIV) epidemic remains a significant burden in Malaysia. Stigma related to HIV and its effect on the quality of life (QOL) of persons living with HIV (PLHIV) remains under-reported. The aim of the present study was to assess self-perceived stigma amongst PLHIV attending an urban community clinic and its influence on their QOL. Data was collected using HIV Stigma Scale and WHO-QOL HIV BREF Scale. The overall stigma experienced by PLHIV in this community was higher than previous studies (mean ± SD; 103.37 ±18.14). Majority participants had fear disclosing their disease status, while personalized stigma or the experience of prejudice and rejection was the least experienced. The overall QOL was low and was significantly impaired in social relationship domain (mean ± SD; 12.72 ± 3.59). However, their ability to perform daily activities was not affected by the illness (mean ± SD; 14.48 ± 2.91). PLHIV with higher spiritual values demonstrate lower perception of negative self-image and inferiority (r= -0.54). This finding was unique to PLHIV in this study and suggested the importance of spirituality and personal beliefs on their self-esteem. In conclusion, stigma remains as a significant problem among PLHIV in this community. Primary care offers the best platform to promote a holistic management of PLHIV, where the integration between counselors, religious experts, family and non-governmental associations could come together. The management of PLHIV is unique in every community, hence individualized approach based on cultural norms and beliefs could assist in the overall management of PLHIV.

Keywords: HIV, quality of life, social stigma

INTRODUCTION

Human Immunodeficiency Virus (HIV) epidemic remains a significant health threat globally despite current advances in its management. According to the Global AIDS Update in 2016, a total of 36.7 million people worldwide were infected with HIV and among these, 2.1 million cases were newly detected in 2015. In the Asian region, about 5.1 million people are reported living with HIV (UNAIDS 2016). An estimated 0.4% of total Malaysian population is infected with HIV (WHO and UNAIDS 2015). This growing number of HIV cases has a great impact to the healthcare system.

Self-perceived stigma amongst PLHIV is one of the barriers to treatment, which leads to devastating consequences (Sayles et al. 2009). However, it remains an area that is not widely explored. Stigma is a "complex situation, which discredits a person, thus reducing their status in the eyes of the community" (Goffman 1963). An earlier Malaysian study showed that 52.9% participants experienced high overall stigma especially in the personalized domain (59.8%) (Choi et al. 2010), while in India, perception of negative public attitude was more predominant (97%) (Thomas et al. 2005).

Stigma amongst PLHIV decreases their quality of life (QOL) (Holzemer et al. 2009). There are many studies, which looked at the QOL in PLHIV, however very few have described self-perceived stigma and its influence on QOL in the local setting. A study showed that most participants are able to function satisfactorily physically (score: 77%) but have social impairment (score: 52%) (Hasanah et al. 2011). Some have reported poor QOL among participants with HIV especially in the social domain (51.2%) compared to other domains (physical; 42.5%, psychological; 40%, environmental; 34%) (Charles et al. 2012).

Stigma is negatively associated with QOL (Holzemer et al. 2009; Thomas et al. 2005). Stigma related to disclosure of disease is associated with avoidance of involvement in recreational activities, poor social support and personal relationships (Charles et al. 2012). Understanding the severity and significance of self-perceived stigma may pave the way for future interventions for a better QOL. The aim of the present study was to assess the level of stigma amongst PLHIV and its effect on their QOL. The association between participants' characteristics, overall stigma and QOL was also evaluated.

MATERIALS AND METHODS

This was a cross-sectional study conducted between June and October 2016 at an urban primary care clinic, which is a referral centre for PLHIV in Kuala Lumpur. Participants were chosen using convenience sampling. PLHIV above the age of 18 years who could read and comprehend Bahasa Malaysia or English were invited to participate in this study, while those with known psychiatric illness and cognitive, hearing or visual impairment were excluded. Sample size was calculated using simple proportion formula with expected proportion of 0.5 from a previous study using confidence interval of 95% (Choi et al. 2010). The total number of registered HIV patients in this clinic was 633. Another 20% was added for possible incomplete questionnaires hence the final required number was 288.

Sample size, n′ =

$$\frac{633(1.96)^2\ 0.5\ (1-0.5)}{0.05^2\ (633-1) + 1.96^2 \times 0.5(1-0.5)} + 20\%\ \text{incomplete QA}$$

$$= 240 + 48$$

$$= 288\ \text{respondents}$$

Stigma was assessed using HIV Stigma Scale (Berger et al. 2001), while QOL was assessed using the WHO-QOL HIV BREF Scale (WHO 2002). The HIV Stigma Scale assesses participants' stigma in four (4) sub-domains (personalized, negative-self-image, public attitude and disclosure concern). Personalized stigma assesses the participants' experience of prejudice due to their illness in terms of employment, relationships and social contacts leading to isolation. Negative self-image assesses the participants' fear of being stigmatized, experience of guilt and inferiority complex. Public attitude assesses how participants perceive public reactions towards their illness and disclosure concern assesses their fear and anxiety of disclosing their illness to others (Charles et al. 2012).

The validated (Cronbach's alpha: 0.92) HIV stigma scale in Bahasa Malaysia consists of 40 items and takes about 20 mins to complete (Othman et al. 2015). The items are scored using a Likert scale from one (strongly disagree) to four (strongly agree). The overall stigma scores ranges from a minimum of 40 to a maximum of 160, with higher scores representing higher levels of stigma.

QOL among PLHIV was measured using the WHO-QOL HIV BREF Scale. There are 31 items with a five (5) point Likert scale (one to five) validated in English and Bahasa Malaysia (WHO 2002; Saddki et al. 2009). It measures QOL in five (5) domains, which include physical needs, spirituality, psychological, environmental and social relationships. Physical needs assesses their ability to perform daily activities, work capacity, energy, mobility and perception on appearance and body image. Spirituality assesses their feelings, personal beliefs, concerns about the future, death and what life means to them. Psychological domain assesses their environment, dependence on medications and their feeling of physical safety and security. Environmental domain assesses their feelings of social inclusion, financial resources and participation in recreational activities. Social relationship looks into their social support, personal relationship and sexual activities (Saddki et al. 2009). In addition to the five domains, it also has two (2) items, which assesses general QOL and health perception (items 1 and 2).

Participants who had high stigma (total score of more than 50th percentile) or low QOL (total score of less than 50th percentile) were referred to the Family Medicine Specialist or the community psychologist for counselling and further management.

Data was analyzed using SPSS software version 22.0. Descriptive statistics, such as frequencies, percentage, mean, median, standard deviations (SD) and interquartile range (IQR) were computed for socio-demographic characteristics, duration of illness, medication status and modes of HIV transmission. Independent sample t-test and Analysis of Variance (ANOVA) were used to assess the differences of means between groups. Pearson's correlation coefficients were conducted to assess the correlation between the continuous variables. The results were considered statistically significant if $p < 0.05$. Finally, for variables with significant associations, Analysis of Covariance (ANCOVA) was performed in order to control for the possibility of bias due to confounding factors. All assumptions were met prior to ANCOVA.

Ethical approval was obtained from Universiti Kebangsaan Malaysia (FF-2015-039) and Medical Research and

Ethics Committee (MREC) (NMRR-14-1112-22375).

RESULTS

A total of 288 participants agreed to participate in this study, however only 272 (94%) completed the questionnaire and were included in the analysis. Table 1 describes the participants' socio-demographic characteristics, duration of illness, medication status and modes of HIV transmission. Majority of the participants were males (n=236; 86.8%) with the mean age of 37.0 years. Mostly belonged to the Malay ethnic group (n=183; 67.3%) and received secondary education (n=127; 46.7%). Majority were single (n=225; 82.7%), employed (n=191; 70.2%) and fell in the income bracket of between RM1500 and RM2999 (n=83; 30%). Most of them were diagnosed with the illness in the last two years and 84% (n=229) were on treatment with antiretroviral therapy (ART). Homosexuality was the most common reported risk behaviours (n=123; 45.2%).

The overall stigma score in this population was between 46.00 and 154.00 (mean= 103.37 ± 18.14). Table 2 shows the mean scores for overall stigma and its domains. Highest stigma was in the disclosure domain and lowest in the personalized domain. This finding suggests that most participants have problem disclosing their status, while the discrimination experienced by PLHIV is low.

Table 3 shows the mean scores for the overall QOL, overall general health perception and the five domains of QOL. The most affected domain in QOL was the social relationship, which suggests that they have poor social support and poor personal and sexual relationship. Physical domain appeared to be the least affected, which suggests that their ability to perform daily activities was not affected by the illness.

Figure 1 depicts a negative correlation between stigma and QOL (r=-0.502). This finding suggests that high HIV stigma was associated with lower QOL. This model explains for 25% of the variability seen. Table 4 shows the correlation coefficient between the domains of stigma and QOL. The strongest correlation was seen between the spirituality domain of QOL and negative self-image stigma, where both variables are inversely related. This means that the higher their spiritual value, the lower was the internalized fear of being stigmatized or guilt. Social relationship was also found to be strongly and negatively related to personalized domain, which means that PLHIV with better social support experience lower discrimination.

This study showed that overall stigma was not affected by socio-demographic characteristics and illness-related profiles (Table 5). On the other hand, education level, employment status, household income and modes of transmission were significantly associated with overall QOL (Table 6). However, after controlling for the confounding variables using ANCOVA analyses, all the differences seen in the mean of overall QOL are insignificant (Table 7).

Table 1: Socio-demographic, disease and treatment profiles characteristics

Variables	**Frequency (%) (N=272)**
Gender	
Male	236 (86.8%)
Female	36 (13.2%)
Age, mean (± SD)	37.0 ± 9.84
Age groups (years)	
19-29	76 (27.9%)
30-39	84 (30.9%)
40-49	77 (28.3%)
≥ 50	35 (12.9%)
Ethnicity	
Malay	183 (67.3%)
Chinese	53 (19.5%)
Indian	21 (7.7%)
Others	15 (5.5%)
Education level	
None/Primary	26 (9.6%)
Secondary	127 (46.7%)
Tertiary	119 (43.8%)
Marital status	
Unmarried	225 (82.7%)
Married	47 (17.3%)
Employment status	
Employed	191 (70.2%)
Unemployed	81 (29.8%)
Household income (RM)	
< 500	54 (19.9%)
500-1499	52 (19.2%)
1500-2999	83 (30.6%)
3000-5000	63 (23.2%)
> 5000	19 (7.0%)
Medication (HIV)	
Yes	229 (84.2%)
No	43 (15.8%)
Duration of illness (months), median (IQR1, IQR3)	48 (24, 108)
Transmission mode	
Homosexual	123 (45.2%)
Heterosexual	67 (24.6%)
Intravenous drug	56 (20.6%)
Blood transfusion	10 (3.7%)
Others/ unknown	16 (5.9%)

Notes: IQR=interquartile range, RM=Ringgit Malaysia

Table 2: Mean scores for overall stigma in different domains

Domains	**Mean score of all items in domain ± SD**	**Mean score for each item in domain ± SD**
Personalized (actual)	44.44 ± 10.54	2.47 ± 0.59
Negative self-image (internalized)	32.29 ± 6.24	2.48 ± 0.48
Public attitude (perceived)	52.46 ± 10.66	2.62 ± 0.27
Disclosure concern	28.73 ± 4.54	2.87 ± 0.45
Overall stigma	103.37 ± 18.14	2.58 ± 0.45

Table 3: Mean scores for overall QOL, overall general health perception and domains of QOL[a]

Domains	**Mean ± SD**
Physical	14.48 ± 2.91
Spirituality	12.86 ± 3.23
Psychological	13.10 ± 2.42
Environmental	13.06 ± 3.06
Social relationship	12.72 ± 3.59
Overall QOL	66.21 ± 12.33
Overall general health perception	14.14 ± 3.71

[a] Histogram: Normal distribution

Table 4: Correlation coefficient (r) value between domains of stigma and QOL

Stigma (domains)	**QOL (domains)**				
	Physical	**Spirituality**	**Psychological**	**Environmental**	**Social**
Personalized	-0.42**	-0.48**	-0.41**	-0.39**	-0.51**
Negative self-image	-0.36**	-0.54**	-0.45**	-0.31**	-0.45**
Public attitude	-0.32**	-0.46**	-0.37**	-0.27**	-0.45**
Disclosure concern	-0.09	-0.36**	-0.18*	-0.06	-0.21**

Notes: *P < 0.05; **P < 0.001, r < 0.26: poor; r=0.26-0.5: fair; r=0.51-0.75: strong, r=0.76-1.00: excellent

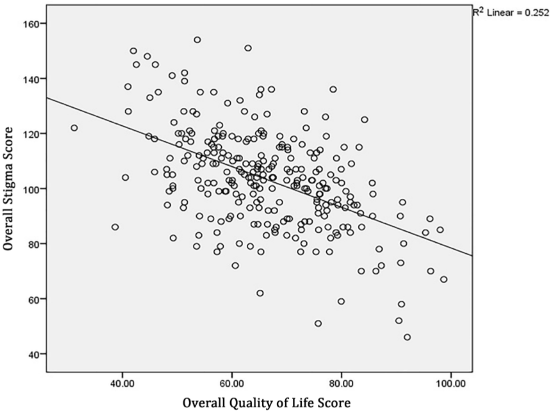

Figure 1: Correlation between overall stigma and overall QOL

Table 5: Mean scores of overall stigma according to socio-demographic and disease related variables

Variables	Mean overall stigma ± SD	F-value[a]	P-value[a]
Gender			
Male	103.58 ± 17.61	0.255[b]	0.614[b]
Female	101.94 ± 21.58		
Age group (years)			
19 - 29	104.33 ±18.32	0.490	0.689
30 - 39	103.04 ± 17.44		
40 - 49	104.22 ± 17.33		
≥ 50	100.20 ± 20.61		
Ethnicity			
Malay	104.55 ± 18.47	0.979	0.403
Chinese	99.75 ± 16.33		
Indian	102.38 ± 19.79		
Others	103.13 ± 17.81		
Education Level			
None/Primary	103.73 ± 15.10	0.440	0.644
Secondary	102.28 ± 18.35		
Tertiary	104.45 ± 18.62		
Marital status			
Single	103.66 ± 18.24	0.281	0.755
Married	101.60 ± 15.55		
Divorced/widowed	104.18 ± 21.12		
Employment Status			
Professional	102.49 ± 17.25	0.170	0.843
Non-professional	104.04 ± 18.46		
Unemployed	103.27 ± 18.72		
Household Income (RM)			
< 500	103.11 ± 19.73	0.689	0.600
500-1499	106.81 ± 18.77		
1500-299	102.51 ± 18.78		
3000-5000	102.44 ± 16.34		
> 5000	100.32 ± 14.41		
Medication (HIV)			
Yes	103.10 ± 18.11	0.569[b]	0.570[b]
No	104.81 ± 18.45		
Transmission mode			
Homosexual	102.75 ± 18.49	1.431	0.224
Heterosexual	104.59 ± 15.03		
Intravenous drug	101.38 ± 16.76		
Blood transfusion	115.40 ± 15.73		
Others /unknown	105.69 ± 25.54		

[a] One-way ANOVA, [b] Independent sample t-test

Table 6: Mean scores of overall QOL according to socio-demographic and disease related variables

Variables	Mean Overall QOL ± SD	F-value[a]	P-value[a]
Gender			
Male	66.12 ± 12.36	0.760[b]	0.780[b]
Female	66.73 ± 12.29		
Age group (years)			
19 - 29	66.43 ± 13.02	1.900	0.130
30 - 39	68.07 ± 12.13		
40 - 49	63.56 ± 11.61		
≥ 50	67.04 ± 12.34		
Ethnicity			
Malay	65.67 ± 12.11	1.470	0.223
Chinese	68.86 ± 12.76		
Indian	66.94 ± 12.32		
Others	62.28 ± 12.92		
Education Level			
None/Primary	64.90 ± 10.09	10.502	<0.001
Secondary	63.00 ± 11.59		
Tertiary	69.91 ± 12.60		
Marital status			
Single	66.24 ± 12.54	2.797	0.063
Married	68.87 ± 11.82		
Divorced/widowed	62.35 ± 11.10		
Employment status			
Professional	70.89 ± 11.68	8.868	<0.001
Non-professional	65.06 ± 11.28		
Unemployed	63.29 ± 13.18		
Household Income (RM)			
< 500	61.60 ± 11.65	8.009	<0.001
500-1499	61.48 ± 11.09		
1500-2999	68.05 ± 12.78		
3000-5000	69.18 ± 10.70		
> 5000	74.42 ± 12.49		
Medication (HIV)			
Yes	66.59 ± 12.60	1.190[b]	0.235[b]
No	64.15 ± 10.68		
Transmission mode			
Homosexual	67.16 ± 12.83	2.674	0.032
Heterosexual	66.60 ± 11.48		
Intravenous drug	62.05 ± 9.24		
Blood transfusion	64.96 ± 7.97		
Others /unknown	71.56 ± 17.61		

[a] One-way ANOVA, [b] Independent sample t-test

Table 7: Comparison of QOL between education level, employment status, household income and modes of transmission after controlling for potential confounders

Variables	Mean Overall QOL (95% CI)	F-value[a]	P-value[a]
Education level			
None/Primary	67.40 (62.30, 72.50)	1.190	0.306
Secondary	65.31 (62.32, 68.30)		
Tertiary	68.15 (65.09, 71.21)		
Employment status			
Professional	68.28 (63.58, 72.99)	0.399	0.671
Non-professional	65.65 (61.71, 69.59)		
Unemployed	66.93 (62.76, 71.19)		
Household Income (RM)			
< 500	62.37 (57.45, 67.29)	2.110	0.080
500-1499	63.64 (59.00, 68.28)		
1500-2999	68.94 (65.00, 72.87)		
3000-5000	67.86 (63.29, 72.48)		
> 5000	71.97 (64.90, 79.03)		
Transmission mode			
Homosexual	66.93 (64.37, 69.49)	0.738	0.567
Heterosexual	66.69 (62.73, 70.65)		
Intravenous drug	66.71 (62.98, 70.44)		
Blood transfusion	63.28 (55.63, 70.93)		
Others/unknown	71.17 (65.08, 77.26)		

[a] Adjusted mean using ANCOVA controlling for possible confounders

DISCUSSION

This study revealed that majority of PLHIV in this community were single and young with the mean age of 37.0 years. Most of them were males, from the Malay ethnic group with good education, job and income. An earlier Malaysian study showed a similar age distribution (Hasanah et al. 2011). However, PLHIV from China and the Western region tend to be older with the mean age of 44.0 years (Li & Sheng 2014; Shacham et al. 2011). Majority participants from this study also reported homosexual transmission. Researches have shown that there is increasing prevalence of HIV among men having sex with men (MSM) (WHO and UNAIDS 2015), which supports the finding of this study.

The overall stigma experienced by PLHIV in our community was higher when compared to a study done in Washington (Relf & Rollins 2015). The different cultural norms may explain for the discrepancies of the levels of stigma. An earlier study in Malaysia showed that different categories of health care workers including doctors and nurses also reported the fear of the potential stigma and emotional stress when exposed to the disease (Santhna et al. 2007). This study found that stigma is highest in the disclosure domain. This finding is consistent with other studies done locally where almost 96% of them did not disclose their HIV status to their family members (Choi et al. 2010; Othman et al. 2015). The fear of disclosing their status especially to their sexual partners has a big impact, as this is a major step in prevention of disease spread. Literature has shown that patients need to be psychologically prepared and understand how HIV affects their responsibility in sexual relationships before they can comfortably disclose their status (Shacham et al. 2011). Therefore, it is important that the implementation of interventions to reduce stigma take this issue into consideration. Factors that have been identified to encourage disclosure include living with friends and relatives, good access to psychosocial services and being financially stable (Deribe et al. 2008).

Personalized stigma, which is participants' experience of prejudice due to their illness, was found to be the least experienced compared to other domains, which mirrors previous findings (Choi et al. 2010). Some other regions have shown the opposite, where personalized stigma was the most affected (Relf & Rollins 2015). There is not much evidence to explain the differences seen, but the study setting could be one of the factors contributing to the contradicting findings. It has been suggested that living amongst those with higher social status could lead to increased actual stigma (Li & Sheng 2014), as seen in the study by Relf & Rollins (2015). Another possibility is that since most participants in the current study did not disclose their status, they did not experience the stigma, as their status was unknown to others.

The overall QOL of participants in this study is low. The biggest impact of QOL is in the social domain, which means that participants perceived that they do not get adequate social support and have poor personal relationships with others. This finding is similar to earlier studies in this region (Imam et al. 2011; Wan Zaidi et al. 2012, Hasanah et al. 2011). However, findings from Western data differ, where PLHIV have a satisfactory function in the social domain (Rüütel et al. 2009). This could possibly be due to the difference in the culture and norms of Asian's where there is a marked prejudice towards HIV, in which HIV is associated with low moral values and attitude. This may force PLHIV to prefer social isolation and also choose to refrain from disclosing their disease status. A study involving general public in Malaysia revealed that despite adequate knowledge, most participants displayed discriminatory attitude against PLHIV. This is strongly affected by how the PLHIV was infected, whereby those who were infected due to homosexuality or drug abuse were perceived to have low moral values, hence were avoided (Wong & Nur Syuhada 2011). Another study done in Universiti Kebangsaan Malaysia Medical Centre (UKMMC) also revealed that health care workers also has the tendency to discriminate patients with known blood borne diseases, which in turn may result in suboptimal care to patients (Santhna et al. 2007). Therefore, to nurture a more responsible community towards this condition in the future, people should be educated and encouraged to adopt a positive behaviour towards PLHIV. Campaigns should not only be directed to reduce HIV epidemic, but should also highlight HIV stigma and include the importance of reducing stigma against PLHIV among the public and also health care personnel.

The physical domain was least affected among PLHIV in this study. The relatively high level of overall general health perception supports this finding. Physical wellness has a major impact on quality of life (Nojomi et al. 2008), and since most respondents believe that they are physically competent, their QOL in the physical domain is not affected. Current available treatments and medical facilities may have contributed to this, as majority (84%) of the participants were already on treatment.

The findings of this study show that overall stigma is inversely related to the overall QOL, which clearly depicts that PLHIV enjoy a better QOL when they perceive low levels of stigma. This is similar to findings from other studies, albeit a small difference in the strength of correlation between the domains (Holzemer et al. 2009). Another interesting finding from the current study is that PLHIV with higher spiritual values have lower negative self-image. The negative self-image gives a sense of worthlessness, which may result in loss of motivation to receive treatment (Sayles et al. 2009). Spirituality, philosophy and religion may be closely related, suggesting a possible role of concurrent religious approach in the management of PLHIV. Instilling spiritual input by creating support groups involving motivational and religious experts conducting counselling and motivational talks may uplift them spiritually leading to a better perception about themselves, and eventually contribute to treatment success.

PLHIV who have good social support, experience a much lower personalized stigma. However, the relationship between QOL in the social domain and personalized stigma from other studies are inconsistent and varies from country to country suggesting a more complex association between stigma and the different domains of QOL. A study in India reported that PLHIV who have experienced social rejection and discrimination were more determined to have a better QOL (Thomas et al. 2005), while another study in Iran concluded that social support is an important factor that influence their levels of stigma (Zarei et al. 2017). Family support has been proven to lessen the burden of stigma, therefore intervention to reduce stigma should include the involvement of family members and close associates (Li & Sheng 2014). Additionally, employers, health care workers and the general public should be educated to work together to achieve zero discrimination towards PLHIV. This would ensure a more conducive environment for PLHIV to live, work and contribute in the community (Ministry of Health Malaysia 2015).

There are several limitations in this study. Since participants were from a single health centre which has well-established treatment facilities for HIV, the possibility of selection bias could not be ruled out but nevertheless, this study provides an insight to our local situation pertaining stigma and QOL amongst PLHIV. Future studies done using qualitative method in multiple study sites may provide a more in-depth view and experience on stigma and QOL among Malaysians living with HIV. Data was collected from a single centre hence the findings may not be generalised to the whole country. Some section of the questionnaire required patients to remember events from the past and hence may include a recall bias.

CONCLUSION

In conclusion, stigma remains as a significant problem among PLHIV in our community, which may be due to the cultural influence. The inverse relationship between stigma and QOL especially related to spiritual and self-image suggests a possible benefit of concurrent spiritual approach in the management of PLHIV in our community. PLHIV have poor social support and personal relationships, hence it is prudent to involve family members in the overall management with patient's consent. Primary care provides the best platform where a more comprehensive approach in managing PLHIV can be achieved. Group or personalized motivational counselling may play a pivotal role in success of the overall management PLHIV by reducing stigma and improving QOL.

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