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Biographical Reinvention through Additive and Subtractive Strategies: The Experience of Men Living with HIV in Indonesia

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Abstract: HIV diagnosis and management have often caused disruptions to the everyday life and imagined futures of people living with HIV, both at individual and social levels. This has been conceptualised, in a rather dystopian way, as 'biographical disruption'. This paper attempts to re-cast data from interviews with 40 men living with HIV (MLHIV) in Yogyakarta and Belu, Indonesia, in a slightly more positive light. Our analysis uses the concepts of additive and subtractive resilience strategies and we show how, rather than having a purely disrupted biography, participants talked about their experiences of 'biographical reinvention'. Study participants were recruited using the snowball sampling technique, starting from two HIV clinics in the settings. Data were collected using one-on-one in-depth interviews, and a qualitative framework analysis was used to guide step-by-step data analysis. The findings showed that despite the disruptions in their everyday life (i.e., mental health condition, work, activities, social relationships, etc.) following the HIV diagnosis and management, MLHIV in our study managed to utilise their internal assets or traits (i.e., hope, optimism, resilience) and mobilised external resources (i.e., support from families, friends and healthcare professionals) to cope with the disruptions. An interweaving of these internal assets and external resources enabled them to take on new activities and roles (additive resilience strategies) and give up health compromising behaviours (subtractive resilience strategies). These were effective for most MLHIV in our study not only to cope with the HIV repercussions and improve their physical and mental health conditions, but to think or work on a 'reinvented' biography which encompassed resilience, hope and optimism for better health, life and future. The findings indicate the need for HIV interventions and healthcare systems that provide appropriate support for the development and maintenance of internal assets of PLHIV to enable them to cope with the repercussions of HIV and work on a 'reinvented' biography.

Keywords: Biographical disruption; biographical reinvention; additive strategy; subtractive strategy; hope; optimism; resilience; men living with HIV; Indonesia

1. Introduction

HIV diagnosis and management have often caused disruption to the everyday life and future of people living with HIV (PLHIV), both at individual [1-4] and social levels [3, 5, 6], which by Bury is conceptualised as biographical disruption [7]. The concept of biographical disruption was initially introduced to describe a fundamental rupture in the fabric of everyday life of people living with chronic illness, including rheumatoid arthritis, and how the illness experience disrupted their perception and understanding about themselves or life and future [7-9]. The disruptions could happen towards people's habitual behaviours, patterns or routines that govern or structure their daily life, which Bury called 'the disruption of taken-for-granted assumptions and behaviours' [7]. This will require people to profoundly rethink the ideas about their futures and contend the disruptions of the illness to those futures, which he called 'fundamental rethinking of a person's biography and self-concept' and mobilise external resources to respond to or to cope with disruptive impacts [7].

In addition to the stories of biographical disruptions HIV presented to their life which resemble those previously reported [3, 10-13], men living with HIV (MLHIV) in this study also shared experiences on how they had been trying to cope with those disruptions. In this paper, we use a more 'assets based' (e.g., hope, optimism, resilience) approach which is trying to look for positive things MLHIV have and how and why they enabled MLHIV throughout their experience of 'reinventing' their biography or future. To understand how MLHIV can have hope for a future we rely on the concept of hope by Snyder and colleagues, which is defined as a "motivational state that is based on an interactively derived sense of successful (a) agency (goal directed energy) and (b) pathways (planning to meet goals)" [14, 15]. It involves both agency or will to pursue goals and pathways or abilities to identify those goals and find ways to reach them [14, 16]. Thus, hope is about the motivation that supports people's desires of goals and directs people towards those goals [14, 17]. Similarly, we borrow the concept of optimism from Seligman's work on 'learned optimism' [18]. It is about people's expectation for the best possible and positive outcomes or a better future, which positively influences their life and can help them avoid negative emotions or stress, depression and anxiety [18, 19]. It helps people to make a positive attribution about succeeding now and in the future. Thus, it is associated with a positive outcome outlook or attribution of events, which includes positive emotions [19, 20].

We also explore external resources available to MLHIV during the difficult circumstances and how those resources were used to cope with the mental health and social repercussions of HIV [7, 21]. The external resources may include supportive social networks and relationships with families, friends and neighbours that can help them cope with the disruptions and develop their future [4, 7]. It emerged frequently in the participants' narratives how their hope and optimism (i.e., for better health condition, life and future) were supported by social support from families, friends, healthcare professionals and co-workers. To understand how those internal assets (hope, optimism, resilience) and external resources were used together by participants to enable them to think of or work on a 'reinvented' biography or future, we use the concepts of 'additive resilience strategy' and 'subtractive resilience strategy' from Ward and colleagues' work on understanding how and why people quit smoking and remain as non-smokers [22].

Consistent with Bury's concept of 'biographical disruption' [7], it is obvious in the participants' narratives that the onset and management of HIV bring about ruptures to the fabric of their everyday life (i.e., mental health condition, activities, work and social relationships, etc.). Despite such disruptions, the participants had internal assets and external resources that enabled them to think of or work on a 'reinvented' biography or future. In this paper, we presented the use of additive and subtractive strategies that involves an interweaving of the men's internal assets and external resources throughout their experience of 'biographical reinvention' [22-25]. As the use of these strategies to conceptualise how internal assets and external resources enable 'biographical reinvention' in the context of HIV has never been reported, this becomes the novel contribution of our study to knowledge of HIV management or coping. Thus, in this paper, we covered the men's accounts of both the features of biographical disruption and how they integrated the condition of living with HIV into their lives using additive and subtractive strategies to cope with the disruptions and 'reinvent' their biography or future.

2. Methods

2.1. The concept of biographical reinvention

Building on the concept of 'biographical disruption', the concept of 'biographical reinvention' was introduced in research to understand different resilience strategies smokers used to quit smoking and remain as non-smokers or maintain their new identity - *'non-smoker'* [22]. In their study, Ward et al explain that to quit smoking and remain as non-smokers, people employed what they called additive and subtractive resilience strategies [22]. Additive strategies refer to people's engagement

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in new activities, roles and practices in their individual life or within the context of their community groups and organisations, which could help them quit smoking or focus on activities other than smoking. Subtractive strategies are about giving up activities, practices and social relationships that reinforce smoking behaviours. The success of these strategies is also determined by the mobilisation or use of external resources (i.e., social support from families, friends, healthcare professionals, etc.) by individuals experiencing disruptions due to illnesses. Thus, additive and substrative strategies often involve an interweaving of individuals' internal assets or traits and external resources that enable people in taking on health promoting activities, practices and roles and quit health compromising activities, behaviours and social relationships [22-25]. The two concepts assisted us in analysing and understanding the ruptures HIV presents to the everyday life and social life of MLHIV and how they utilised their internal assets or traits and mobilised available external resources to develop better health, life and future. Guided by these concepts, we conceptualised how MLHIV think of or work on 'reinvented' biography as people with resilience, hope and optimism for better health, life and future.

2.2. Study settings

Belu is located in the Eastern Indonesia and shares the border with East Timor [26]. It has 12 sub-districts and 81 villages and covers an area of 1,284,94 km^2, primarily rural and occupied by a total population of 204,541 people [26]. It has 17 public health centres or sub-public health centres, three private hospitals and one public hospital where the only HIV clinic in the district is located [27]. HIV care services available at the clinic are limited to HIV counselling, testing and antiretroviral therapy (ART). Liver and kidney function tests, CD4 tests and viral load tests to support ART or measure the effectiveness of ART are not available. Yogyakarta municipality covers urban areas of 46 km^2 and is part of the Special Region of Yogyakarta province, Indonesia[28]. It has a total population of 636,660 people [28]. The healthcare facilities available in the district include 20 hospitals and 27 public health centres and sub-public health centres [28]. HIV care services, such as HIV counselling and testing (VCT), CD4 and viral load tests, ART, and other medical tests to support HIV treatment, are provided in ten public health centres and four hospitals [29, 30].

2.3. Participant recruitment and data collection

Data reported in this paper are part of a large-scale qualitative study that sought to understand HIV risk factors, impacts and services use among PLHIV in Yogyakarta and Belu, Indonesia. Using the snowball sampling technique, initial participants were recruited through HIV clinics in each setting after securing permission letters from the clinics. It began with the distribution of information sheets containing details about the study and the field researcher's contact numbers through the receptionists and information boards of the clinics. Participants stated their intention to participate through short message service (SMS) or phone calls. An initial conversation was made between the field researcher (NKF) and each potential participant to discuss and agree upon the interview time and venue. The recruitment process took six months (June to November 2019), with 40 MLHIV finally participating in the study. The sociodemographic profile of the participants is provided in Table 1.

One-on-one in-depth interviews with participants were conducted in a private room at the HIV clinic in Belu and a rented house nearby the HIV clinic in Yogyakarta. The interviews were approximately 35 to 87 minutes, performed in Indonesian (the primary language of the participants and researcher who also speaks fluent English) and audio recorded using a digital recorder. For this particular topic, the interviews explored participants' perceptions and experiences about disruptions HIV presented in their daily individual and social life and how they utilised their internal traits or capital and mobilised external resources to cope with those disruptions and develop better health, life and future. Data saturation and the richness of information were used to justify our decision to cease participant recruitment and interviews. These were reflected in the similarities of responses by the last few participants to those of previous ones. One person in Belu withdrew his participation for personal reasons after the interview ran for 15 minutes and the recording was deleted and excluded from this analysis. No repeated interview with any of the participants was conducted. Due to the sensitivity of the information collected during the interviews, we decided not to offer opportunities for participants to read, correct and provide feedback on the interview transcripts. This was to avoid divulging the participants' HIV status, in case they had not disclosed it to family members if transcripts were received and read by their family members.

2.5. Data analysis

Before the comprehensive analysis, the audio recordings were transcribed verbatim by the first author (NKF). Transcription had been initiated alongside the data collection process and notes undertaken during the interviews were integrated into each transcript during the transcription process. The analysis was guided by a framework analysis for qualitative data by Ritchie and Spencer [31] and performed in Indonesian, which helped to keep the sociocultural meanings attached to the information provided by the participants [32]. The transcription process and reading the transcripts repeatedly during the analysis allowed the researcher to become familiar with the data, provide comments on data extracts, and break down the information into small chunks. During the process, key concepts and issues identified from the transcripts were listed and then used to form a thematic framework. The identification of the thematic framework was an iterative process that involved changing and refining themes. Each transcript was indexed by providing open codes to data extracts, followed by close coding to identify and group similar or redundant codes into the same themes and sub-themes. Comparison of the findings (codes and themes) within and across interviews was repeatedly performed throughout data analysis. Finally, the entire data were mapped and interpreted as presented in this manuscript. The selected quotes for this publication were translated into English by NKF and then checked by other authors for clarity. The process of checking and rechecking quotes against the translated interpretations or examination of meaning in both languages was also performed to maintain the accuracy of the translation and credibility of the findings [33]. Authors regularly undertook discussions, comments, feedback and revisions during the analysis and writing process and agreed on the final themes and interpretations presented in this paper.

The ethics approvals for this study were obtained from the Social and Behavioural Research Ethics Committee, Flinders University (No. 8286), and the Health Research Ethics Committee, Duta Wacana Christian University (No. 1005/C.16/FK/2019). For de-identification purposes, all personal information was removed from each transcript. Each transcript was given a letter and number, such as PY1, PY2, …. (PY = participant from Yogyakarta) and PB1, PB2, …. (PB= participants from Belu).

3. Results

3.1. Sociodemographic profile of men living with HIV

The mean age of the participants was 38.12 years, with the majority in the age group of 30 to 49 years (n=30) (see Table 1). Just over half of them had been diagnosed with HIV for two months to 5 years (n=21), while the rest had been living with HIV for a longer time, between 6-10 years or more. The majority were (re)married (n=25), while the rest were unmarried/single or divorced or widowed. The majority graduated from either Junior or Senior High School, some graduated from Elementary School and the rest had graduate diploma certificates. Most of them had either paid jobs or their own business, while the rest had unpaid jobs (i.e., farmers) or were unemployed or quitted jobs due to physical and health-related issues following the HIV diagnosis.

The findings were grouped into three main themes centred around hope, optimism and resilience: (i) hope for better health condition and future; (ii) optimism about recovery and work; and (iii) Resilience towards HIV infection. The details about themes are presented below.

Table 1. Sociodemographic profile of men living with HIV.

Characteristics	Men living with HIV	
	Yogyakarta (N=20)	Belu (N=20)

Age		
20 - 29		7
30 - 39	10	5
40 - 49	10	5
50 - 59		2
60 - 69		1
Marital status		
Single	5	7
Divorced	2	
Widowed/r		1
(Re)Married	13	12
HIV diagnosis		
<1 - 5 years ago	6	15
6 - 10 years ago	7	4
11 - 15 years ago	7	1
Religion		
Islam	17	
Catholic	3	19
Protestant		1
Education		
University graduate/Diploma	7	2
Senior High school graduate	11	8
Junior High school graduate	2	4
Elementary school graduate		6
Occupation		
Entrepreneur	10	1
Teacher		2
Farmer		3
Police		1
Private employee	5	1
Retired civil servant		1
University student		1
Taxi/Motor taxi driver	1	2
Iron welder		2
Mechanic	1	
Unemployed/quitting jobs	3	6

3.2. Hope for better health condition and future for themselves and their families

HIV diagnosis and management, especially at the early stage of the infection, disrupted the everyday life of PLHIV, including the disruption of their physical health, activities, practices and mental health condition. The routines and physical and mental health conditions are coherent aspects that weave the fabric of their everyday life, thus, the disruption to any or all these aspects would negatively impact their life. Despite the disruptive experience of these aspects, as frequently emerged in the narratives of our participants, their ability to make use of internal assets or traits, such as hope (i.e., hope for better health and future), was part of the process to cope with the disruptive experience and 'reinvent' their biography or imagined future. For example, a strong hope for better physical and mental conditions was often mentioned by participants across the study settings, especially those with poor physical and mental health conditions when the study was conducted. '*Better health condition*' was narrated as a goal, and such a strong hope guided their focus and attention towards the goal, as one of them explained: '*I am fully focused on recovery; that is my goal' (PB9).* A better health condition, by these participants, was perceived as a new starting point of the process of beginning a better life or reinventing the self: *'I want to be healthy, and that would be a new phase to start for a better future'* (PY11).

Such a strong hope also guided their plan and commitment to achieving their goal (better health condition), and this can be seen in the compliance with the treatment or antiretroviral therapy (ART) they have started before the study. Some expressed: *'I adhere to the treatment because I want to be healthy'* (PY6) and *'what the doctor says, I will listen and do it'* (PB3). External resource, such as information support from healthcare professionals, was also employed and played a significant role in the participants' biographical reinvention process. The use of information about the ART effectiveness shared by health professionals to amplify commitment to the treatment was an instance of the mobilisation of external resources for self-support and to enable them to think of or work on 'reinvented' biography or future. Such information contributed to increased awareness and knowledge about ART as the only way to regain and maintain good health and helped reduce the emotional repercussion of HIV diagnosis:

"I have a strong hope to be healthy again like before because it's been five months since I've been very committed to treatment [ART] and have never been negligent like before. I collect the medicines every month and take my medicines every day. The doctor said this is the only way to regain my physical health and strength. So, I try not to get worried or stressed out. The doctor said there is no need to stress because the medical treatment could help me recover. This helps me calm down and not get stressed too much. All I want is to continue adhering to the treatment because I want to get better" (PY12).

"The virus is no longer detected in my blood [viral load suppressed], so I must maintain my health. Treatment is number one. I don't want to miss taking the medicines. I always take my medicines on time every day. I have to be committed to the treatment. It is good because when I'm healthy like this, I don't get stressed or worried …" (PB17).

The focus on and compliance with HIV treatment or ART indicated participants taking on new routines (i.e., regular ART access, daily medication intake and regular check-up) and integrated them into their everyday life. The engagement in such new routines or activities is a characteristic of additive strategy useful for their biographical reinvention, and it supported them in coping with physical and mental health and social repercussions of HIV they faced. Engagement in medication-related routines was also supportive in maintaining the awareness of a healthy lifestyle and helped them withdraw from or avoid risky behaviours for ill-health or HIV infection progression. The latter reflected the subtractive strategy which was also crucial in supporting the participants' biographical reinvention or their effort to develop a better future. The use of these strategies was reflected in the following narrative of a participant who talked about being fully committed to ART and aware of healthy lifestyle, and who gave up health compromising behaviours:

"I adhere to the treatment [ART], never missed the medicine even for one day. Medication is a part of my routine. I have been doing the treatment for about two years, so I'm fully aware of the time to take medicine, rest, and sleep. It makes me always aware of my health condition and what to do and not to do to stay healthy. I don't smoke, drink [alcohol], or take drugs like I used to do before the diagnosis and treatment. The doctors and nurses always remind me of these things, so they are always in my mind. It is good because when I feel physically healthy like this, I don't get stressed, and my work is not disturbed" (PY20).

Apart from the physical and mental health-oriented hope, motivation to have a better life and future for themselves and their families was another goal to achieve, which played a role in guiding the attitudes and behaviours of the participants towards the infection and their future. This was another instance of subtractive strategy as one being able to leave behind the ruptures HIV presented to their life and look forward to rebuilding their future or identity: *'I always try to put away all the negative thoughts, feelings and experiences I have been facing and focus on the future. I'm doing good so far' (PY7).* It also reflected the sense of responsibility for themselves and family and the focus on a more family-oriented goal which was beyond themselves. Some said: *'I'm hoping for a better life for my family'* (PB19) and *'the future of my family is my responsibility'* (PY1). Such hope or motivation was an important psychological booster for the management of HIV-related psychological repercussions, such as fear, stress, worry, and depression. It is an internal asset or trait that redirected one's focus from the negative impacts of HIV to the treatment and a better life and future for themselves and their families.

The narratives of most married men who were also fathers across the study settings reflect such motivations or hopeful thoughts, which seemed to be supported by the awareness of their responsibility as the breadwinner for their families:

"After the doctor told me that I'm infected with HIV, I was shocked, stressed, scared, and worried. I was so sad, and all kinds of negative thoughts were always in my head. I felt broken for months, but I am grateful that with the advice and support from some of my friends and HIV counsellors, I could get up. I thought I must keep working, do my activities, and continue supporting my life and family. I hope to be healthy again and strive for a better life for myself and my family. My family needs me. I am responsible not only for myself but also for my family. I am the family's breadwinner; if I don't fight, then what will happen to my family" (PB10).

"I hope to be able to prepare for my children's future. So, I am now trying to continue supporting their education until they finish college. This is my focus. I experienced tremendous pressure when I was diagnosed. I felt ashamed, stressed, and afraid, but after a while, I realised my children need me to prepare for their future. So, I try to overcome all the pressures and focus on my kids' life and education. I work passionately for the sake of the children, not for myself" (PY16).

3.3. Optimism about recovery and work

Optimism was another positive internal asset or trait underpinning the expectation for the best possible and positive outcomes for men we interviewed in this study. As mentioned in their narratives, optimism about the high possibility of getting health recovery was amplified by the initial positive effects of ART on improving their physical health. For example, some participants explained: *'The medicines [ART] are very helpful'* (PY5) and *'My body is getting stronger because of the treatment'* (PB11). Thus, such optimism was also a reflection of a positive evaluation of the effectiveness of the treatment and the firm belief in the high possibility of physical and mental health recovery. It also showed the participants' ability to make positive attribution of the initial successful results of the treatment with the possible future success if adherence to the treatment is maintained. Moreover, such optimism seemed to be a positive indication of a mental strength to overcome or manage the psychological and social repercussions of HIV infection, which could be an early sign of a successful biographical reinvention:

"When I started [ART] treatment a year and a half ago, my body was covered in itchy sores, and I was scratching. However, after several months of receiving this medical treatment, I no longer feel itchy, the itchy sores have healed, and I feel physically strong. I feel positive, and this motivates me to continue antiretroviral therapy so that my viral load is suppressed and I don't have to be worried about passing the virus on to my wife" (PY9).

"I'm optimistic that I will be fine and my health condition will recover. I was diagnosed with HIV last year [2018]. I started antiretroviral therapy seven months ago, I was very weak physically, but now you can see I'm getting stronger physically. I do not want to get stressed anymore; I want to enjoy my life and continue the therapy because it works for me, and I am optimistic that I will get better" (PB14).

The latter participant from Belu also linked his optimism for regaining physical health or strength with new activities he had just engaged in before the interview, including being part of a choir group that had regular singing practice and taking on a role as a committee member of football competition at sub-district level. As such activity and role required physical strength and mobilisation from one place to another for coordination, his ability to engage in such an activity and role was a sign of physical health improvement compared to the condition before the initiation of ART. Thus, this underpinned his optimism and was seen as a positive trajectory for recovery. Taking on the new activity and role was additive strategy that supported his biographical reinvention process and helped him to regain his self-belief, as portrayed in the following narrative:

"When I was diagnosed with HIV, I was terrified and I thought I would not be to do anything else. My body was frail and, in my mind, if someone gets HIV, he will be sick forever and just waiting to die. He will be more in bed and unable to work or move properly. Being involved in regular choir and singing practice and taking part as a committee member for the ongoing football matches, I have become more confident that I can still do whatever activities I want, and I am even more optimistic that I will recover" (PB14).

Participants who had a job also showed strong optimism about keeping their jobs. Some optimistically expressed: 'I'm positive about keeping my job, as long as I want, I can keep my job for years ahead, and I'm doing great with my work' (PY13). The participants also talked about the support they received from co-workers and families, which was external resources that helped them be optimistic and carry on with their job. At the same time, the interweaving of optimism and the external resources (support from co-workers and families) helped them cope with adversities, especially psychological repercussions, such as stress, worry and concern:

"I'm working for an NGO providing support for people living with HIV. Some of us [staff] are HIV, and other are not. We [the man and his co-workers] know and support each other. I'm happy with my work" (PY5).

"My parents and sisters, especially my oldest sister, who is a nurse, are very supportive. They support me to work so I don't get stressed by just being at home and doing nothing. They take care of me, monitor my medication, remind me to collect the medicines. That's why I'm now healthy and continue to work and earn money for myself" (PB4).

3.4. Resilience: accepting, finding the meaning of challenging life experiences and bouncing back

Resilience in coping with and adapting to HIV-related complex and challenging life circumstances, primarily through mental, emotional, and behavioural flexibility to 'bounce back' from adversities, was part of the biographical reinvention of participants in both study settings. The findings highlighted the resilience in participants' ability to face and accept disruptions or negative experiences of HIV and to find positive meanings in those experiences. For example, participants described how they endlessly try to adapt their daily life and activities to the condition of living with HIV, reflect on the related challenges and find ways to manage them. Although these were described as *'a very challenging task'* (PB2), *'hard work to accomplish'* (PY19) and *'never end effort'* (PY2), these seemed to build strong courage among the participants to cope with HIV-related negative consequences. The following narratives of two men who had been living with HIV for 3 and 5 years reflect how they managed to overcome the repercussions HIV presented to their life:

"I felt tremendous pressure in the first year after being diagnosed. But I have been trying to accept the situation [HIV positive status] and learn to live with HIV as normal. It's not easy; I can feel it until now. I try to think positively and strengthen my mind and heart to live with HIV in my body. Gradually the fear, anxiety and stress decrease until now" (PY3)).

"It was a tough fight I have gone through to be able to accept my [HIV] status and to feel like a normal [non-infected] person. I guess I succeeded in passing through those difficult moments, and here I am. I do not overthink about this infection anymore. I am living a normal life like others" (PB1).

Efforts to explore the positive meanings of HIV-related disruptive experiences were also part of the resilience towards the infection. The efforts - to interpret such negative experiences in a positive way - were seen in their attitudes and actions to understand what the challenges meant to their lives and families. Such efforts led to different pathways of thoughts and reflections and a conclusion to change their attitudes and behaviours (i.e., change negative pattern of sexual behaviour), become helpful to others, such as families and friends, and look at the future positively. These illustrated both subtractive resilience strategy through giving up negative behaviours and additive resilience strategy through engagement in new activities to help families and others:

"I got HIV because I had sex with many casual partners every place I went. I think the infection is a warning for me to change the bad pattern of my sexual behaviour and be faithful to my wife. I used to spend money to have sex with sex workers, but after I got HIV, I prioritise my family's needs. I am also involved in volunteer activities to help other friends [PLHIV] and support them to access treatment, so I feel useful to them. Doing this makes me feel less stressed or burdened" (PY10).

Participants in Yogyakarta and Belu were able to overcome various HIV-related challenges and successfully bounced back from the difficult circumstances they faced following the diagnosis and got stronger mentally. Their stories informed us how they rose from difficult situations during their early stage of HIV infection and tried to return to their pre-HIV state. This was reflected in the new perception of themselves as much more organised persons and how they cared more about their health and work compared to pre-HIV diagnosis:

"I want to show people that being infected with HIV is not an obstacle to being successful in business. For a year [during the early stage of the diagnosis], I experienced psychological shocks; stress, depression, and worry. Many negative thoughts came to my mind. But I tried to cope with all these challenges and improve myself and my work. Now my business is growing, and my income is increasing" (PY19).

"Contracting HIV is not a good thing, and I don't want to get it, but I am grateful because my life has become more organised after the diagnosis. I care about myself and my health. I know when to take medicine, rest and work. I feel like my life is more balanced. Before being diagnosed with HIV, I didn't care about my health condition. I got drunk often, smoked cigarettes, and had sex with sex workers without thinking of the consequences, but now I am always aware of what I do. …." (PB5).

The latter participant expanded his perception of being a more organised and health caring person by talking about his self-consciousness about what he did in his everyday life. He mentioned about *'think before doing'* which reflects his self-consciousness of activities or routines he engaged in on daily basis. This was an indication of being able to overcome HIV-related disruptions and aware of when an activity should be undertaken for the sake of health or in his term *'there is time to work, eat, play and rest'*, which is also an indication of being a self-organised person.

4. Discussion

This paper presents the use of additive and subtractive resilience strategies as enablers of biographical reinvention which have not been reported in the context of HIV [22]. While our participants' experiences of biographical disruptions brought about by HIV onset and management are not dissimilar to those of other PLHIV in different settings globally [21, 34, 35], our study highlights novel findings on the application of additive and subtractive strategies that involves an interweaving of individuals' internal assets or traits, such as hope, optimism and resilience, and external resources, including support from families, healthcare professionals, friends and co-workers, in the participants' biographical reinvention. It highlights how these strategies enabled these men to work on a 'reinvented' biography as people with resilience, hope and optimism for better health, life and future for themselves and their families.

Hope represents the participants' motivational state that supports their desires for goals (i.e., better health condition and future for themselves and their family) and directs them towards those goals [14, 15]. Thus, the recognition of these goals to achieve despite the disruptions HIV presented to their life was the underline reason for the strong hope the participants had. Such hope (for a better health condition) enabled them (i.e., to think of or work on a 'reinvented' future) for it is perceived as the prerequisite or starting point for a 'reinvented' future. Similarly, it enabled the participants due to the awareness of their responsibility for families and future of their children, which could only be possibly fulfilled if they have a better health condition. As reflected in our findings, the men's hope for a better health condition and future is intertwined with or underpinned by the mobilisation of external resources, such as informational support from healthcare professionals. These findings provide an understanding of how an interweaving of these aspects (internal asset - hope and external resource - health provider support) enabled participants in taking on new positive activities (i.e., regular ART access, daily medication intake and regular check-up (additive strategy)) and giving up health compromising activities (i.e., cigarette smoking, alcohol drinking, and drug use (subtractive strategy)). The application of these strategies enabled them to cope with or leave behind negative experiences (mental health and social repercussions of HIV) and work on a 'reinvented' future [22, 35, 36]. The findings have significant implications for HIV interventions and healthcare providers to recognise internal assets PLHIV have and provide appropriate support to amplify those assets and enable PLHIV to cope with HIV challenges and develop their future. In addition, our findings indicate the importance of PLHIV's self-recognition of their internal assets which can strengthen them psychologically to take on health promoting behaviours, activities and roles to maintain their physical and mental health and well-being and cope with difficult circumstances [22, 37].

This study has also highlighted the link between optimism [16, 18] and successful biographical reinvention, which is another novel finding of the current study. Optimism for recovery, for example, arose from the participants' positive evaluation of the effectiveness of ART as reflected in the improvement of physical health condition, and this enabled them to see a 'reinvented' future through the therapy. Similarly, optimism for positive future job, stemming from the recognition of their positive job performance, enabled them to see a positive 'reinvented' future or prevented them from being worried about future. Thus, the study also highlighted the importance of attributing between the present positive condition resulting from initial ART and future positive outcomes of the therapy and recognising other factors that support positive emotions and encourage actions to overcome the mental health repercussion of HIV [18, 19].

However, it should be noted that the ability to make an attribution and identify helpful strategies and actions are also determined by other factors, such as education, health literacy and social support from others [38-40]. Findings from previous studies with different population groups of PLHIV have suggested that PLHIV with good HIV health literacy and who receive or have external resources, such as emotional and social support from families, friends and healthcare professionals, have better access and adherence to ART and better psychological or mental health and well-being [3, 40, 41]. On the contrary, other studies have reported that health illiteracy (i.e., a lack of knowledge of ART and its effectiveness) and the unavailability of HIV services and social support are barriers to HIV treatment and contributing factors for depression, stress and anxiety among PLHIV [42-46]. Our findings also report the undertaking of additive strategy through the participants' engagement in new activities and roles and an interweaving of optimism and external support from co-workers and families that strengthened their self-belief in recovery and enabled them to cope with adversities and develop their future. It is therefore crucial that HIV information or education for PLHIV, which covers the linkage to treatment and ART adherence and its benefits, needs to be strongly emphasised in HIV interventions, services and healthcare system. This may result in positive behaviour changes towards HIV treatment or ART as previously reported [47]. The findings also inform HIV program implementers of the importance of establishing social support networks of families, friends, healthcare professionals and co-workers for PLHIV, which are enabling external resources for them to cope with psychological and social repercussions of HIV and work on a 'reinvented' future [48, 49].

Our findings also highlight strong resilience in the men's ability to accept their HIV-positive status and find positive meanings out of the challenging situation [19]. This is consistent with the findings of previous studies with other population groups of PLHIV [50-53], reporting self-acceptance and self-reliance as supporting factors to cope with HIV-related mental health repercussions. The results reveal self-acceptance and finding meanings as enabling factors that led to the change in negative attitudes and behaviours (i.e., sex with sex workers) and the commitment to help other PLHIV (i.e., facilitating others to access ART). These reflect the core aspects of both subtractive and additive resilience strategies and the participants' self-realisation as external resources for others in need [22, 35]. Thus, it is plausible to allude that accepting HIV-positive status and meaning-making may assist men in overcoming challenges and improving their mental health, which may also have positive impacts on the overall health and well-being of their family members.

4.1. Limitations and strengths of the study

There are some potential limitations that should be cautious of when interpreting the findings. The starting points of recruitment through HIV clinics and the use of the snowball sampling technique might have led us to recruit participants from the same networks and who were on ART. It is, therefore, possible that PLHIV, who were not on ART and outside of the current participants' social networks, could have been under-sampled. Thus, their HIV-related perceptions and experiences, which might differ from those of the current participants, may not have been covered in the present study. However, the study's strength is that this is an initial qualitative study to explore in-depth biographical reinvention of MLHIV through additive and subtractive strategies. The coherent and structured way of qualitative data management to enhance transparency, rigour, and validity of the analytic process as guided by the framework analysis is also another strength of the study. Further large-scale studies to explore internal assets of PLHIV and how those assets help them cope with HIV challenges and work on their 'reinvented' biography or future are recommended.

Also, as the participants in the current study were on ART, further studies on this topic need to involve PLHIV who are not on ART and compare their findings to those presented in this paper.

5. Conclusions

This paper uses 'assets based' approach which is trying to look for positive things MLHIV have. It presents how MLHIV coped with biographical disruption HIV presented to their life and utilised internal assets, such as hope and optimism and resilience, and external resources, including support from families, friends, co-workers and healthcare professionals, to enable them to take on new activities and roles (additive strategy) and give up health compromising behaviours and practices (subtractive strategy). These were effective for most MLHIV in our study not only to cope with the HIV repercussions and improve their physical and mental health conditions but also to 'reinvent' their biography or future. The findings indicate the need for HIV interventions and healthcare systems that provide appropriate support for the development and maintenance of internal assets of PLHIV to enable them cope with the repercussions of HIV and think of or work on a 'reinvented' biography or future. Interventions to build social support networks for and/or among PLHIV are also recommended.

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