



Perceived Value of Microenterprise for Low-Income Women Living with HIV in Alabama

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Abstract

We characterized the potential benefits and risks of participating in a microenterprise program targeting low-income women living with HIV (WLWH) in Alabama; and described potential mechanisms through which microenterprise programs could influence sexual risk behaviors and engagement in HIV care. Fourteen stakeholders and 46 WLWH (89% African American) participated in the qualitative study. Data were collected using in-depth interviews (stakeholders) and focus group discussions (WLWH). NVivo qualitative software was used for the management and analysis of the data. The data revealed four main mechanisms through which microenterprise programs could potentially improve health outcomes: (1) social support and encouragement from other women, (2) improvement in self-esteem, (3) creating structure in the women's lives, and (4) financial strengthening. Potential risks included unwanted disclosure of HIV status, stigma and loss of insurance benefits. Microenterprise programs have the potential to be acceptable and may contribute to improved health and social outcomes among low-income WLWH in Alabama.

Keywords HIV · Microenterprise · Low-income · Women living with HIV · Sexual behaviors · Engagement in care

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Introduction

The Southern states experience the greatest burden of the HIV epidemic (1–3), and account for approximately 51% of new HIV cases each year (3) [1–3]. The incidence rates of HIV among women in the Southern states are among the highest of all regions in the country [1, 2]. This disparity is driven in part by socioeconomic factors such as poverty and income inequality [3]. Further, Southern states are disproportionately affected by social–structural factors such as inadequate access to health care, limited employment opportunities, housing challenges, and stigma/discrimination, which are all significant drivers of the HIV epidemic in the United States [2, 4–6]. Black women are disproportionately affected, accounting for 67% of all diagnosed cases of HIV among women in the South [3].

Poverty increases women's vulnerability for contracting HIV [5, 7, 8]. In addition, women living with HIV (WLWH) and in poverty are less likely to engage in care and achieve viral suppression thereby increasing the risk of transmitting HIV to their sexual partners; and experiencing poor health outcomes [9–11]. Of note, women as primary caregivers of their families, may choose to sell their HIV medication [10] and engage in sex work or transactional sex (sex in exchange

for food, shelter, and other goods and needs) in an effort to meet basic needs and take care of their families [12, 13]. The importance of addressing the social determinants of health in HIV prevention and control programs has been acknowledged both domestically and internationally [14]. HIV programs are now being conceptualized to include structural interventions to promote economic empowerment, gender equality and access to support services such as safe housing and access to substance use programs [14–17].

Including economic interventions such as microenterprise and microfinance in HIV programs show promising results in improving financial capacity and addressing potential pathways that increase women's vulnerability to engaging in transactional sex and sex work [8, 18–20]. Microenterprise includes a broad range of activities designed to increase income, improve access to resources and build capacity in order to reduce poverty-related stress, improve health behaviors, and enhance health outcomes [21]. These activities aim to address poverty and include life-skills training, production of commercially viable products and devices to generate income, financial training, financial support or provision of credit and emergency loans [21]. Much of the evidence of the effectiveness of economic strengthening programs is based on studies conducted in developing countries, which primarily involved women living in poverty and or engaged in sex work [19, 22–27]. One notable jewelry making based microenterprise pilot study, Jewelry, Education for Women Empowering Their Lives (JEWEL) conducted by Sherman and colleagues, targeting women using illicit substances and involved in sex work in the United States revealed preliminary evidence of reduction in the number of sexual partners and receipt of money for drugs or sex [28].

The use of microfinance and microenterprise programs as an HIV support strategy for women who are living with HIV is not well documented. Based on the limited data available from studies conducted in international settings, the potential for microenterprise programs to contribute to improved adherence to HIV medications and engagement in care seems promising [29–31]. With qualitative interviews and focus group discussions, we characterized the potential benefits and risks of participating in a microenterprise program targeting WLWH in Alabama, United States; and described the potential mechanisms through which microenterprise programs could influence HIV risk behaviors and engagement in HIV care.

Methods

This study is part of a larger qualitative research project which was informed by the social–ecological model, and was designed to characterize the ways in which poverty and other structural factors contribute to HIV risk behaviors

and engagement in HIV care [13]. The social–ecological model underscores the importance of considering multiple levels of influence (individual, interpersonal, organizational, community, and societal/policy levels) when designing and implementing interventions to change individuals behaviors [5, 32]. Importantly, the model assumes that implementing changes in the social environment is essential for fostering and improving population health outcomes [32].

The study was conducted in 2012 and involved 60 participants (14 stakeholders and 46 WLWH) in Birmingham, Alabama. The stakeholders included staff of major HIV treatment and support facilities (including 3 HIV clinics) in Birmingham as well as representatives from the faith-based, legislative, and business communities. Stakeholders were ≥ 19 years old and resided in Alabama at the time the study was conducted. WLWH who were eligible for this study were 19–64 years old, with self-reported low socioeconomic status, and seeking care at selected recruitment sites in Birmingham. WLWH who were less than 19 years of age or resided outside of Alabama were not eligible to take part in this study.

Purposive and snowball sampling were used to recruit stakeholders. Stakeholders who consented to take part in the study were asked to participate in an hour-long in-depth interview. We partnered with HIV care/service providers to recruit WLWH to participate in the study. Flyers were also posted at the recruiting sites. The women who consented to participate in the study were asked to take part in an hour-long focus group discussion (FGD). Each of the focus group discussions consisted of 5–9 women. Focus group discussion and interview guides were used to facilitate the data collection (similar questions were included on the instruments).

To orient participants to the concept of microenterprise, key elements of microenterprise were explained and a brief summary of the JEWEL project [27] was used as an example. Briefly, the participants were told microenterprise is a type of small business in which women work together to start the business and the profits are shared among the women. The women are usually trained and assisted with the resources required to start the business. JEWEL is an example of a microenterprise project that was conducted in the U.S.A. In this pilot study the women participated in HIV prevention sessions; and were assisted with jewelry making, marketing and selling. This example was followed by a series of questions such as: (1) What are your thoughts on the use of microenterprise as an HIV support strategy? [probes included importance, benefits, challenges etc.]; (2) Would you be willing to participate in a microenterprise program? [probes—why/why not?]; (3) Do you believe WLWH would be willing to participate in a microenterprise program? [probes—why/why not?]; (4) What types of microenterprise projects do you think women would be interested in under-taking? (5) What effect if any could participating

in microenterprise programs have on health behaviors and outcomes of WLWH? [probes included adherence to ARVs, retention in care, risky sexual behaviors]. In relation to types of microenterprise, specific questions were asked about the women's interest in making product such as jewelry, handbags and sandals; and cultivating the *Moringa Oleifera* plant [33] to make products such as tea, pasta and cookies. These products were selected based on ease of production, income generating potential or history of their use in microenterprise programs.

The interviews (n = 14) and FGDs (n = 7) were audio recorded and conducted by the first author (MW), in private rooms at the recruiting sites. Participants were also asked to complete a brief questionnaire to assess socio-demographic characteristics (age, education, employment, etc.). The stakeholders were not given a financial incentive to take part in this study; however, the WLWH were given US\$30 at the end of the FGD. Institutional Review Board (IRB) approval was granted by the University of Alabama at Birmingham and written informed consent was obtained from all participants before they were enrolled in the study.

Audio-recordings were transcribed verbatim and stripped of any personal identifying information. The data analysis incorporated both inductive (themes emerged from and grounded in the data) and deductive (informed by the social-ecological model and the literature) coding [34, 35]. A thematic analytic approach [36] was used to guide the identification of themes and presentation of the findings. NVivo qualitative software (QSR International version 9) was used for the management, coding and analysis of the data. The findings are presented with supporting quotes from the participants designated by their age, gender and type (stakeholder vs WLWH). The management and analysis of the data has been described elsewhere [13].

Results

Among the forty-six WLWH who participated in this study, most were African Americans (89%), unemployed (88%) and earned less than \$11,000 yearly (65%). The mean age of the WLWH was 44.6 ± 9.6 (20–62) years, and 63% reported a high school level education or less. The stakeholders (N = 14) were primarily females (64%) and reported a college level education or higher (57% completed a master's degree or higher). The mean age of the stakeholders was 45 ± 10.9 (29–60) years and 50% were Caucasians. Most of the participants WLWH (80.0%) and stakeholders (86%) reported that they believed including microenterprise in HIV programs could help WLWH adhere to medication/treatment (Table 1).

Although a wide range of income-generating activities were suggested (e.g. starting a restaurant or café, making

Table 1 Characteristics of participants WLWH (n=46) and Stakeholders (n = 14)

Characteristics	Women living with HIV (%)	Stakeholders (%)
Age (years)	44.6 ± 9.6	45 ± 10.9
20–34	17.4	21.4
35–49	52.2	35.7
≥ 50	30.4	42.6
Race	89.0	50.0
College education or higher	33.0	100.0 ^a
Employed	12.0	100.0
Annual income < \$11,000.00	65.0	^b
Has health insurance	62.8	^b
Economic status affects aspects of life	58.7	^b
Married	20.5	^b
Number of children		^b
0	15.0	
1	20.0	
2–3	37.0	
> 3	28.0	
Microenterprise could help WLWH adhere to medication/treatment	80.0	86.0

^a57% Master's degree or higher

^bNot asked

homemade pastries or jams, jewelry making, sandal making, knitting/quilting, manufacture of bath and body oils), in general, the participants felt that quilting, jewelry and sandal making were the most feasible products to create and market in a microenterprise project. Food service activities were highly favored; however, it was decided that factors such as HIV stigma and stringent regulations governing the food service industry would make it difficult for these types of microenterprise to be successful. Most of the participants were not interested in *Moringa Oleifera*-based microenterprise programs or any form of microenterprise programs which involved growing plants or gardening. Concerns about stigma associated with farm-related activities (especially among black women), pests, marketing, logistical issues (access to land, the process of growing and harvesting the plant etc.) and potential confusion about herbal treatments for HIV infection were some of the reasons for the lack of interest in the *Moringa Oleifera* plant.

Overall, the three main themes that emerged from the data are: (1) potential benefits (financial and psychological); (2) potential risks (unwanted disclosure of HIV status, loss of health insurance benefits and HIV stigma); and (3) potential effects on health (positive and negative). These themes were consistent among the stakeholders and WLWH. The

themes and sub-themes are described below and summarized in Fig. 1.

Potential Benefits of Microenterprise for the Lives of WLWH

The two principal mechanisms in which participating in a microenterprise could be potentially beneficial for WLWH are via financial strengthening and employment; and psychosocial support.

Financial Strengthening and Employment

Most of the participants were optimistic that microenterprise programs could provide financial support for WLWH. They also explained that this form of employment opportunity would be particularly beneficial for WLWH. The participants expressed that WLWH are often challenged by their ability to secure and maintain jobs; due to factors such as stigma, health issues, inflexible work hours, and a history of substance use and incarceration. Additionally, the participants explained that a history of substance use threatens the ability to secure and maintain employment in the formal work sector, and often serves as a gateway to sex work. One of the participants shared her experience of losing her job due to HIV stigma:

I can attest to that I worked at [Fast Food Restaurant] for seven years and one of the customers found out that there was someone there that had AIDS and they didn't want their kids to be around in that environment they

were getting ready to throw a party and they cancelled it because somebody slipped and said they had AIDS they pointed at me my boss man came to me and they fired me. [51-year-old, AA, WLWH]

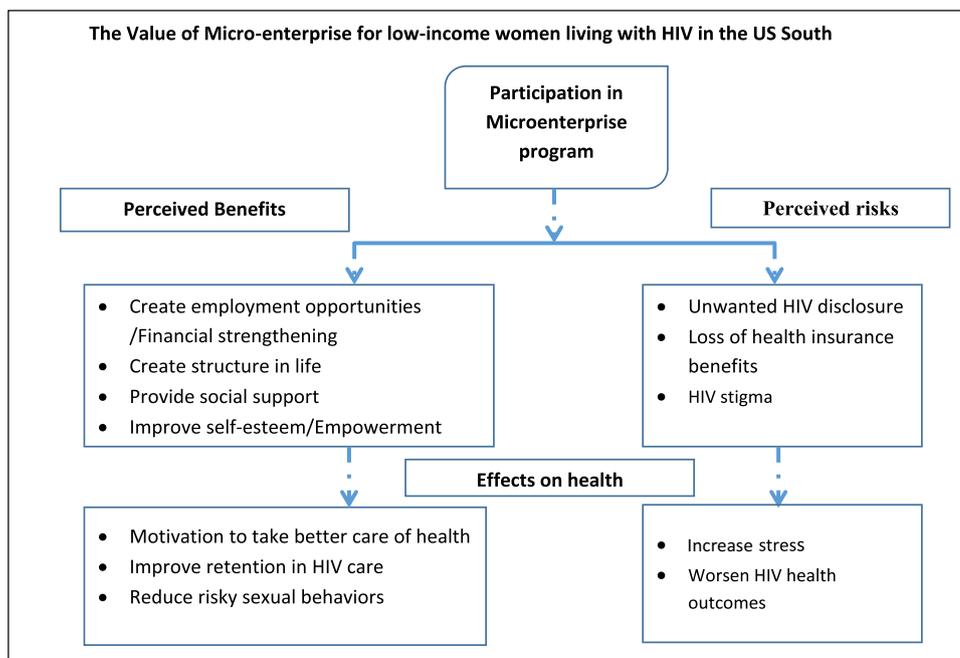
Importantly, a few stakeholders, one of whom had experience implementing a microenterprise project in the United States, noted that the income from these interventions would not significantly improve one's financial standing, and expressed concerns about sustainability. Two participants (a stakeholder and WLWH) also shared examples of failed local microenterprise projects due to inability to market/sell the products. Nonetheless, the participants felt that the small amount of income to be generated from microenterprise programs would be valued in this setting, as the beneficiaries had very limited resources. The participants expressed that the income could also improve one's ability to cover costs associated with engaging in HIV care (e.g. transportation, food, and co-pays associated with health care).

I think the income itself would be important because we are most likely talking about low-income people just sort of by nature of the trends you know that I'm familiar with. And so, the additional source of income could be valuable. [29-year-old, AA, Female Stakeholder]

Psychosocial Support

The participants explained three main ways in which participating in a microenterprise project could provide psychosocial support for WLWH namely: (1) improving self-esteem;

Fig. 1 Perception of microenterprise—summary of main themes



(2) providing social support/connectedness; and (3) creating structure in the women's lives.

Improved Self-esteem Most of the participants expressed the opinion that WLWH who are living in poverty tend to suffer from low self-esteem. They identified factors such as negative experiences associated with racism, unsupportive social environment in homes (e.g. lack of father figure and abusive relationships), and low education as additional contributors to developing poor self-image and low self-worth. Low self-esteem was further exacerbated by an HIV diagnosis. The participants also described a relationship between low self-esteem and increased risky sexual behaviors that increased their vulnerability to contracting HIV.

I think it [cause of low self-esteem] goes way back to our ancestors. I know for me I can remember being in abusive relationships and I really believe it a man beat on me he loved me, and I got that from my mother. My mother use to be in relationships where men would beat her, and I would go to help her and fight the men off and when it was all over with she would tell me to go back to your room and then she would say “well if he didn't love me it wouldn't have done it”. So, for a long time if a man beat on me I thought that meant they loved me. I remember when I got into prostitution out on the street to sell – like you said I was looking for love in all the wrong places [agreeing with participant] and the more men that would have me the better I thought I looked – I look pretty you know because I would be with more man. I just wanted to be loved. When you said looking for love in all the wrong places – we don't realize who we truly are. It started way back from how my mom treated me growing up as a little girl. [54-year-old, AA, WLWH]

As once again our self-esteem, is low these are the things we need to feel pretty and because our beauty is being taken or stolen we agree to stuff with these Joe-blow [man in the street] who is the destroyer, who tells us that we are ugly, we are Black we are worthless, ignorant, we are stupid, we are not going anywhere and it has affected us in such a way to where it is hard for us to dig our way out of it. And money is a way maker. If we saw capabilities in ourselves, we would see that we have all the options that everybody else have. [28-year-old, AA, WLWH]

Both stakeholders and the women strongly expressed that participating in a microenterprise program could give the women a sense of purpose and value in their lives. This they felt would in turn improve self-esteem. The women's ability to create a product, generate an income, and be independent of their male partner were a few of the perceived ways

in which women's self-worth could be improved. Common descriptors such as self-sufficient, creative, productive, feeling good about self, helps with your morals and values and self-worth were used by the participants.

I think it [including microenterprise in HIV programs] would be a good idea, because again it goes back to a lot of those women with poor self-esteem. Thinking, well I am HIV positive, there is, my life is over. So, if you can show them that there is life after HIV, you know if this is the low educated woman that we deal with here, to give her something to let her know that, hey I can be vital to society. There is something that I can do to help somebody, or to make me feel empowered, I think that would be a great idea. The women that I see have such low self-esteem about themselves. So, this is giving something to look forward to, something to wake up to every morning. Something to be proud of, so if you have something it's just like an individual without HIV, if you have something that motivates you and make you feel good about yourself, you don't have to fall back on that sexual activity that you are doing to get the nurturing that you so, you got. You feel good about yourself, you feel like hey I am doing something to better me, so I don't need that person over there who may be belittling me or just using me for sex. And then if you feel good about yourself then you want to continue feeling good about yourself, then you will go to your doctor's appointment, be more apt to take your medication because you're going to have a goal, and you want to be successful. [57-year-old, AA, Female, Stakeholder]

It builds self-esteem. I just believe it is a more positive thing, it shows me how to get out there in the world and do something with what I made, with my talent. It allows me to blossom and grow. [25-year-old, AA, WLWH]

Provide Social Support/Connectedness The participants reported that there is much to be learned from sharing experiences with people who are like you (i.e., living with HIV), which could help with managing and coping with HIV infection and the associated stigma. Creating opportunities for women to work together, form networks and share their experiences would be particularly beneficial especially among individuals who tend to isolate themselves because of HIV infection. Some participants also shared that there are limited support groups for women as compared to men. Therefore, the program could serve as a support group, which can encourage women to share their stories, challenges and triumphs in a non-threatening environment. This perceived supportive environment in which women understood what it meant to be living with

HIV was highly valued among the women as it was felt that “outside people they don’t understand our illnesses.” [49-year-old, AA, WLWH]

Sometimes you can feel like you are the only one going through something you know. When the way you find out like other people have your same situation you know. We all can help each other, and you know, form a little enterprise or whatever. You can just keep up lifting each other, you know it’s going to be ok you know. It’s good because you have people who understand you, working in the same place. So, you wouldn’t feel like you are all alone. And then you can make money so that is good. [23-year-old, AA, WLWH]

Yes of course the income is a huge thing because with income then they can hopefully you have transportation to the doctor you know medications copays whatever they need and also the main thing is just that support system of working with a group of women that are going through the same thing they are they can share their triumphs and their struggles and through that they can all grow and encourage themselves. [53-year-old, Caucasian, Female, Stakeholder]

Create Structure in Life Some of the participants described a mechanism in which microenterprise programs could create structure in the lives of WLWH resulting in a positive effect on health. In this way, participating in microenterprise programs could give the women an opportunity to utilize their time constructively. Having something to do was considered therapeutic. Participating in work—many of the women were unemployed—hence the idea of having “something to do” was appealing as being engaged with work could potentially evoke positive and mentally stimulating thoughts rather than being preoccupied with all the challenges they were experiencing in their lives including living with HIV.

I think it [microenterprise] would work because if you have something to do instead of sitting around dwelling on, churning on, you don’t know what’s going on in our lives...if you had something it would take the bad things out of our mind, and we’d think about positive things we’re doing to help ourselves and others. [49-year-old, AA, WLWH]

Potential Risks

The participants identified three main ways in which participating in a microenterprise program could have a negative effect on health: (1) stigma and fear of unwanted disclosure of HIV status; (2) stress; (3) and risk of losing health insurance benefits.

Stigma and Fear of Unwanted Disclosure of HIV Status

Some of the participants shared that stigma and discrimination were still problems in their communities. They expressed that WLWH tend to keep their HIV status private due to fear of stigma and discrimination. The participants highlighted that depending on the way in which the program was promoted (i.e. target WLWH versus at-risk women) participating could potentially lead to unwanted HIV status disclosure and stigmatization. The participants also expressed that the stigma in the community could also influence the success of the business. Thus, to reduce the potential effect of this stigma the participants suggested the program should be branded or marketed as one that targets at-risk women, rather than WLWH. In addition, due to fears of unwanted HIV status disclosure some of the women expressed that they would prefer the microenterprise project to be home-based (i.e. work individually from home rather than group-based at a service or other designated facility).

If some people know or find out that you are HIV positive they don’t want you around, they are not going to eat [from you], they don’t want you touching anything. If you have to touch the food, they don’t want it. [52-year-old, AA, WLWH]

I think food of course would be worse. We’re taboo the stigma is still there. [52-year-old, AA, WLWH]

I also realize that this is Alabama, it is the state of hate. I hate everybody except people like me. I mean so that these microenterprises and the people that participate are going to have people who must have strong desire and develop a sense of this is who I am, and I have to move on with my life. But it is going to be a challenge, it is going to be a challenge. [53-year-old, Caucasian, Female Stakeholder]

Risk of Losing Health Insurance Benefits

A few participants shared the possibility that the women may risk losing their health insurance benefits by participating in microenterprise programs, as there is a maximum that Medicaid recipients can earn to remain eligible for health insurance. This was therefore considered a disincentive to work or participate in a microenterprise program.

There is this whole notion of economic disincentive to work in AL. This whole issue of Medicaid and losing your health benefit and your Medicaid check if you work. So I think that if you – whoever is going to do this have to really understand that. So that I think that I would really advise anybody that want to promote this notion, that they understand very clearly the economic and health care implication of creating a microenter-

prise that could potentially cause the person to lose their health care benefits. [55-year-old, Caucasian, Male Stakeholder]

Potential Effects on Health (Positive and Negative)

The participants reported that participating in a microenterprise program could result in both positive and negative effects on health among WLWH. The two main perceived health benefits pertained to improving engagement in care/medication adherence and reducing sexual risk behaviors. In a number of instances, these potential benefits as described by the participants were related to improvements in psychological wellbeing wherein improved mental health and self-esteem would motivate the desire to practice healthy behaviors; rather than merely providing economic support to cover costs (i.e. transportation, HIV medication co-pays and taking care of basic needs). In describing this relationship some participants expressed that a microenterprise program could improve self-esteem, inspire hope and motivate women to cope with an HIV diagnosis and take better care of their health (healthier life choices and behaviors; being happier and connected to others).

Well it is important, because when people start to see success in their life they start to view themselves differently. And, for some they their lifestyle has put them in a situation that's allowed them to become ill, and they weren't there because that's what they enjoyed doing all the time. They were there because they felt like they had no other options or sometimes it was easier. When you give a person an opportunity so that you can earn and you can be successful by working hard, some people will latch hold to that and for the first time in their life feel value and feel like they're valuable and that they have worth because they've got something that they can point to and say I've been successful at this small business venture. [55-year-old, Caucasian, Male Stakeholder]

One of the stakeholders described the relationship between microenterprise and improved health as being more complementary than direct:

Empowering them, allowing them to stand on their own two feet, the psychological impact of it - happiness, satisfaction, fulfillment - which comes with being successful and being successful because of your own actions and your own hard work...so yeah, if they start small microenterprises that grow and become successful, there's a better chance than not that they are going to have more satisfaction and happiness and fulfillment. And I'm not saying that satisfaction and fulfillment comes from work alone but this program - being

the nature of what it is - would be so connected to their health and them receiving treatment in working through their health problems that I think if you could bring the two together then have the microenterprise program complement the health treatment then you have a different model...it's not just - I guess what I'm trying to say is that if this business is successful, that doesn't mean that these women will all of a sudden become healthy and happy but it could lead to a complement to the treatment. I think the social support - you know if you have a group of women that you could get to hold each other accountable, that would certainly be easier. [29-year-old, Caucasian, Male Stakeholder]

However, one stakeholder explained that although microenterprise has the potential to improve engagement in care, it should not be assumed to be a natural byproduct. He felt this outcome should be integrated in the program to achieve the desired result.

I think the potential is there. I think it could be a natural by product, but it I think it [engagement in care] need to be a part of the mission statement and attention must be paid to it. I think it just won't happen. People have to have time where they get together and discuss these issues and hey discuss things like how one takes their meds, how does one get involve in self-care activities, without disclosing or feeling the requirement to disclose their health information. [55-year-old, Caucasian, Male Stakeholder]

In relation to sexual behaviors, some of the women shared that they have engaged in sex work and transactional sex in the past to meet their basic needs. Often, selling sex was a necessity for survival, and other options of income generating activity would be preferred if only they had a choice. Other factors such as low self-esteem, being a single mother, inability to cover the cost of condoms and having too much time on one's hands also influenced their sexual behaviors.

I think black women, it's so many of us that are single mums so, when we get anything that walk in our lives even though we can know that he is not the man for us, he is still a partner [and can be a father] to the kids. He is there; he is the man. [40-year-old, AA, WLHW]

Condoms are expensive. You know, it is cheaper not doing with it you know. Instead of buying twenty condoms for 12 something dollars, it is cheaper to do without, you know. Unless you get them free from the clinic later. [23-year-old, AA, WLHW]

The WLWH described several ways in which participating in microenterprise programs could deter them from selling sex. These include:

I think it could be self-esteem, boost morale, decrease depression, because you're working toward something, and then of course you are making money. I don't really think most of us want to be out there trying no tricks [selling sex] anyway so if we have an alternative, make money and in our own business, I think it would do wonders for HIV positive women. [41-year-old, AA, WLWH]

You know why I say I do because it would give that person something to do. You see a lot of time you we go to the risky behaviors with the men and stuff because we have nothing to do. We don't have nothing to do. I think it would increase our values, our self-esteem. And we would be independent. We don't need to get a man to validate us, we would have ourselves to validate us. [54-year-old, AA, WLWH]

The stakeholders also described similar mechanisms in which microenterprise could reduce risky sexual behaviors among WLWH.

In relation to negative effects on health, a few of the participants mentioned concerns about stress that could result from participating in a microenterprise project, and its potential effects on health. The main sources of stress discussed were related to the management and operation of the microenterprise project (including marketing of the products) especially in instances where the women do not have business skills or acumen; and feelings of being pressured if it were required to routinely report on measures of health when participating in the study. Thus, the participants speculated that experiences of stress could adversely affect the health condition of the women involved, as described below:

Stress and that's not good for HIV stress. [52-year-old, AA, WLWH]

And the last one would be from the business skills perspective – especially the marketing side – how do you make money in a small business? It's hard...very, very hard. And very stressful. So, people who have health problems; stress is probably not something that you want to create for them. [29-year-old, Caucasian, Male Stakeholder]

Discussion

The findings from this qualitative study suggests that including microenterprise in HIV support programs targeting WLWH is acceptable and could potentially contribute to reducing sexual risk behaviors and improve engagement in HIV care. The study revealed four main mechanisms through which microenterprise programs could potentially contribute

to improving health outcomes among WLWH: (1) motivation to change health behaviors due to improved self-esteem; (2) financial strengthening (increases in income), which would boost women's ability to provide for basic needs and assist with costs associated with engaging in HIV care and reduce the need to engage in sex work; (3) social support/connectedness and encouragement from other women participating in the program; and 4) create structure in their lives (providing activities to keep them busy and engage their minds).

Perhaps the most important finding from this study is the potential role of microenterprise in improving self-esteem and the resulting effects on motivating women to take better care of their own health, including reducing sexual risk behaviors and engaging in HIV care. Low self-esteem has been shown to be associated with increased sexual risk taking [37–39]; and reduced medication adherence [40]. The participants in our study explained that microenterprise programs could potentially create a community of women who work, form networks and share their experiences. Learning from shared experiences could help with managing and coping with HIV infection and the associated stigma. These findings are also consistent with other studies highlighting the importance of social support for HIV medication adherence [41, 42]. In addition, a qualitative study conducted by Prather et al. [18], also recommended including self-esteem building activities in microenterprise programs targeting low-income women in the US to influence sexual risk behaviors and health related decision making.

A number of the women shared that they have engaged in sex work in an effort to meet basic needs, which is in concordance with studies showing financial insecurity increases sexual risk taking among women [5, 9, 43]. Studies in the US [44] and elsewhere [45–47] have shown that unemployment is a challenge among individuals living with HIV. Thus, it was not surprising that the idea of providing alternative employment opportunities and sources of income via a microenterprise program was widely accepted as a potentially viable option to secure resources required for survival as many were unemployed. These programs could be particularly beneficial to women who experience challenges securing employment due to history of incarceration. The flexible work hours made microenterprise attractive, especially for women who have had challenges maintaining jobs in the formal sector due to factors such as stigma, health, and transportation challenges. The potential effect of microenterprise on reducing sexual risk behaviors was the most direct benefit that the participants described. These findings are consistent with the literature demonstrating that high risk sexual behaviors may be reduced through participating in financial strengthening programs [25, 28, 48, 49].

The participants in our study noted that there are potential negative consequences that may result from participating in

microenterprise programs. These consequences primarily included fears of stigma and unwanted disclosure of their HIV status, stress, and fears of losing one's health insurance benefits. The burden of HIV stigma in the Deep South is well documented in the literature [2, 50]. Importantly, participants described two central ways in which stigma and discrimination could affect the success of the program. First, fear of unwanted disclosure of the participants' HIV status and related HIV stigma could serve as a barrier to participating in the program. Second, stigmatizing attitudes and behaviors from community members could influence the income generated from the microenterprise (e.g. community members may not be willing to purchase products made by individuals who are living with HIV). In addition, our findings suggest low-income WLWH experience multiple levels of stigma which may devalue their perception of self (lower self-esteem) and influence health behaviors (e.g. sexual behaviors and engagement in care). This finding aligns with recent research conducted by Rice and colleagues [51], which revealed experience of intersectional stigma among WLWH in the Deep South may serve as a barrier to access and uptake to HIV care [51].

The participants in the study explained that participating in a microenterprise program could create structure in their lives (especially given the high levels of unemployment) providing meaningful use of their time and mental stimulation thereby contributing to improving their health. This mechanism is plausible as a systematic review conducted by van der Noordt et al. [52], revealed employment has positive effects on health outcomes, specifically with regards to depression and general mental health outcomes. Additionally, a systematic review conducted by Norstrom et al. [53], showed unemployment is associated with negative effects on health. However, fear of losing financial and health insurance benefits have been identified as barriers to employment among individuals with HIV in the US [54, 55]. Of note, fear of losing one's health insurance benefits was also a concern among participants in our study.

This qualitative study has several limitations. First, we relied on self-reported data from participants, most of whom have never participated in a microenterprise program. Therefore, the information presented is based on their perceptions of potential benefits and negative consequences that could be associated with participating in a microenterprise program. Second, we are not able to determine if the perceived benefits and risks are unique to participating in a microenterprise program or is related to any form of employment in general. Third, the study involved a non-random sample of self-reported low-income WLWH (most of whom were African Americans and ≥ 35 years) who were seeking HIV care/services at 4 recruiting sites in Alabama. The experiences and perceptions of other WLWH may be significantly different from those who took part in this study. Similarly, the

experiences and perceptions of the stakeholders who participated in this study may be different from other stakeholders. Therefore, the findings of this study should be interpreted in this context.

Despite these limitations, this study describes potential pathways in which microenterprise could improve health outcomes among WLWH in Alabama. The findings strengthen the call for further research to determine mechanisms in which microenterprise programs influence health behaviors (e.g. sexual risk taking and engagement in care) and health outcomes among WLWH. Specific pathways that should be examined include: (1) self-esteem; (2) financial strengthening; (3) social support/connectedness; and (4) creating structure in the women's lives. Our findings also suggest measures should be taken to prevent potential unwanted consequences such as disclosure of the participants' HIV status, stigma, and loss of health insurance benefits before individuals are enrolled in a microenterprise program as well as during program implementation.

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