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Effect of Mentor Mothers Support on HIV Service Utilization Among Sero-Positive Women in Addis Ababa, Ethiopia, 2022

Meaza Getahun Sileshi[a]*, Lebitsi Maud Modiba[b]

[a]*Nordic medical centre-Institute of Higher Education; P.O. Box 31831, Addis Ababa; Ethiopia; Department of Health Studies, College of Human Science, PHD in Public Health candidate at University of South Africa/ Unisa, Pretoria, South Africa. https://orcid.org/0000-0002-4996-2265*

[b]*Department of Health Studies, College of Human Science, University of South Africa, Pretoria, South Africa. DLitt et Phil; Professor at Unisa.*

[a]*Email: meazag@gmail.com; 58540571@mylife.unisa.ac.za,* [b]*Email: modiblm@outlook.com*

Abstract

Background*:** HIV affects people around the world; especially women of reproductive age group are mostly affected with increased pediatric HIV infection. Strategy like mothers' support group (MSG) is important to achieve elimination of mother to child HIV transmission through empowering HIV positive women. The purpose of this study was to evaluate the effect of mentor mothers' support on enhancing health service utilization among sero-positive women in selected health centers in Addis Ababa city, Ethiopia. ***Methods*:** Quantitative descriptive study design was utilized in seven selected government health centres in Addis Ababa, Ethiopia. On March, 2020 around 352 HIV positive mothers participated in the study that selected through simple random sampling method. Statistical Package for Social Sciences (SPSS) version 24.0 was used to analyse data and frequency tables and Pearson association (95% CI) used to show association between peer support and service utilization; among these women. ***Result: From 352 HIV positive women 60.8% of them were in the age group between 25 and 29 years. The finding revealed that study participant women utilized available HIV related services. They wanted to be MSG member for educational psychological support (74.4%) and 95.0% of them witnessed their satisfactions with the support provided by mentor mothers'. Almost all of study participants agreed that mentor mothers were trusted for confidentiality and 98.6% of participants stated that mentor mothers responded appropriately questions, or they consult health professional for further explanation. Moreover, 95.2% of study participants mentioned that if they missed their regular education session, mentor mothers call or pay a home visit to know members or their infant's condition. ***Conclusion***: Peer support group is helpful to provide comprehensive care for PMTCT clients and maintain the intended quality of life.

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* Corresponding author.

Keywords: Engagement; HIV; Mentor mothers; Mothers Support Group; PMTCT.

1. Introduction

Around the globe, most of pregnant women with Human immuno-deficiency virus (HIV) infection were living in the Sub-Saharan Africa (SSA) countries; with high rate of unintended pregnancies and bearing inevitable risk of mother to child HIV transmission (MTCT) [1-5].

According to UNAIDS Report, even though prevention of mother to child HIV transmission has been introduced since 2005; Ethiopia is one of the 22 countries with the highest number of pregnant women living with HIV. In the country, there is still a high drop-out-rate of PMTCT service, the proportion of HIV- positive pregnant women who received ART was 25.5% and only 24% of HIV exposed babies received ARV prophylaxis [6-10].

It is believed that mother's support group (MSG) plays a significant role in improving HIV positive women adherence to ART and retention to PMTCT service utilization. The MSG strategy enhances mother-baby pair through utilizing the effort of volunteer mentor mothers who are HIV positive. Many studies evidenced that women who joined peer support had timely HIV antigenic test for their babies than other HIV positive moms who were not engaged in support group. Also MSG brings better PMTCT service retention, ante-retroviral therapy (ART) adherence and infant feeding practice, but as a drawback it was mentioned that it targets on HIV-related services only [11- 20].

1.1 Aim of the study

This study aimed to evaluate the pattern of health service utilization among HIV positive women in relation to their attendance in MSG program.

2. Research Method and materials

2.1 Research setting and period

The study was conducted in Addis Ababa city administration, which is a capital city of Ethiopia. There are ten (10) administrative sub-cities and under the city health administration, there are 116 health centers. From these health centers; around 76 of them have functional mothers support group. Then this study selected two sub-cities conveniently and around seven health centers (Dil-Fre, Amoraw, Goro, Yeka, Entoto number 2, Cheffe and Woreda 10 health centers) were included using simple random sampling method to select HIV positive pregnant women or lactating mothers who were members of MSG. The study was conducted from December 2019 to April 2020.

2.2 Research design

A facility based quantitative cross sectional descriptive correlational method was utilized for this study. This

study design was used to gather numeric information about the characteristics of HIV positive mothers and their coordination with mentor mothers in the context of MSG enrolment.

2.3 Study population

The target population for this study was HIV positive pregnant women and lactating mothers who were members of MSG in those seven selected health centers in Addis Ababa city. Those women who were currently engaged in the support group for more than six months prior to data collection time were the major inclusion criteria to include them as study population. Around 355 eligible women selected for data collector administered questions and 352 of them responded completely with a response rate of 98.3%.

2.4 Sampling method

List of HIV positive mothers was obtained from MSG unit of respective seven health centers and using probability simple random sampling technique MSG members were selected with a quota given to each facility based on the number of enrolled women.

2.5 Data collection procedures

The descriptive quantitative study design was employed using structured questionnaire in the local language Amharic. Four BSc nurses were recruited from St Paul hospital as data collectors and one day orientation was provided for them about how to approach the selected study participants, how to introduce themselves, the need to information sheet and obtaining verbal consent. More discussion was carried out on the contents of the questionnaire and data collectors practiced each question on how to present to study participant women with HIV infection. Survey questions included the socio-demographic information, history of MSG program enrolment, approaches of mentor mothers, and HIV positive women attendance to HIV, ART and infant follow-ups.

2.6 Data analysis

Data analysis has taken place simultaneously with data collection. The quantitative data were checked for completeness, coded and entered to a computer using the Statistical Package for Social Sciences software (SPSS) version 24.0. Then data were analyzed using descriptive summary statistics and associations among variables were done.

2.7 Ethical considerations

Ethical clearance was obtained from University of South Africa (Unisa) Higher degrees committee and support letter was obtained from Unisa-Ethiopia Regional Learning Center. The letter was submitted to National Research Ethics Review Committee and Addis Ababa city administration health bureau provided permission letter. The letter was given to selected health centers with MSG programme and data were collected from target groups after explaining all needed information about the study and techniques of assuring confidentiality were

mentioned to participants and verbal informed consent was obtained from 358 study participants.

3. Result

3.1 Socio-demographic background of study

A total of 358 HIV positive women were enrolled to study and 352 respondents participated with a response of 98.3%. These women were in the age group from 19 years to 42 years of age with the largest proportion of them (60.8%) were between 25 and 29 years of age (Refer to Figure 1).

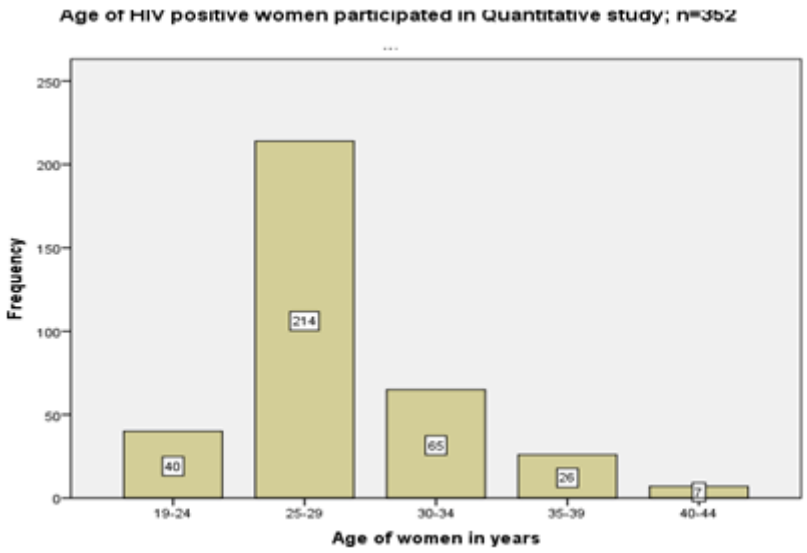

Figure 1: Frequency distribution of age category among HIV positive women participated in quantitative study, May 2021.

Around 227 (64.5%) of study participants were married women with strong social support from their husbands. Concerning religious affiliation among study participants, more than half of these women (58.0%; n=204) were Orthodox Christianity followers and 76 participants (21.6%) were Muslims. It is believed that engagement with religious affiliation among HIV positive individuals help to bounce courage to live and it has optimistic effect on the perception of life.

The educational level of 194 (55.1%) study participants was only primary education and 15.1% (n= 53) of MSG member women had no formal education.

Also half of these HIV positive women were housewives (56.5%) and 47.2% of them had low socio-economic status of monthly income less than 30 USD per month (1 USD is equivalent to 51 Ethiopian birr) (Table 1).

Table 1: Socio-demographic frequency table distributions of MSG member mothers in Addis Ababa, May 2021.

Demographic variables	Frequency (n=352)	Percent (100.0%)
Education level		
Primary education	194	55.1
Secondary education	85	24.1
No formal education	53	15.1
College education	20	5.7
Income level		
< 1500 ETB	166	47.2
1501-2500 ETB	124	35.2
2500-4000 ETB	44	12.5
> 4001 ETB	18	5.1

3.2 HIV related history

Almost 66.8% of study participants were diagnosed with HIV within the last eighteen months as for most of them PMTCT service was an entry point for having HIV testing service. Mainly 21.6% of them knew their HIV status less than twelve months. Around 207 (58.8%) of MSG member pregnant and lactating women disclosed their HIV status to one or more person mainly after their enrolment to MSG. Some of reasons mentioned for not disclosing their HIV status were due to fear of stigma and discrimination from other people (80.0%; n=116), followed by waiting for comfortable time to tell (11.0%, n=16) (Table 2).

Table 2: HIV status and disclosure pattern frequency table distribution of MSG member mothers in Addis Ababa, May 2021.

HIV-related status	Frequency (n=352)	Percent (100.0%)
HIV positive for years		
< 1 year	76	21.6
1-2 years	159	45.2
2-4 years	80	22.7
> 4 years	37	10.5
HIV status disclosure		
Yes	207	58.8
No	145	41.2
Reason for not disclosing		
Fear of stigma	116	80.0
Waiting comfortable time	16	11.0
No close one around to tell	13	9.0
Total	**145**	**100.0**

3.3 Enrolment of women to peer support

HIV positive study participants mentioned that their engagement to MSG was facilitated by PMTCT counselors (68.6%) and by mentor mothers (19.9%). Two-third of study participants were attending educational and counseling sessions in MSG once per week (65.1%) and 34.9% of them attended education every two weeks. Majority of these study participants (63.6%; n=224) mentioned the number of members in their respective group for educational session was between four and eight mothers and 25.0% of them mentioned having group session with more than eight members per group. They also mentioned their reasons to be a member in the MSG were to have psychological support (74.4%), for having knowledge about HIV (16.2%) and 9.1% of them want to have FP services. services and other economic or financial support. Only one MSG respondent mother mentioned her reason to attend MSG discussion as to have continuous condom supply (Table 3).

Table 3: Mothers support group attendance pattern frequency table distribution of member mothers in Addis Ababa, May 2021.

MSG enrolment pattern	**Frequency n=352**	**Percent 100.0%**
Who referred you to MSG?		
PMTCT counsellor MSG	242	68.8
mentor mothers	70	19.9
UHEPs	21	6.0
VCT counsellor	19	5.4
Reason to be MSG member		
To have peer support	262	74.4
For regular educational session	57	16.2
For FP and economic support	32	9.1
To have condom	1	0.3
MSG program schedule		
Once per week Once	229	65.1
Once per two weeks	123	34.9
MSG members per group		
4-7 members	224	63.6
> 8 members	88	25.0
< 3 members	40	11.4

3.4 Mentor mothers' approach towards their peer members

MSG members responded positively for the questions raised about mentor mother/ peer educators' approach. Around 308 (87.5%) of participants mentioned that mentor mothers are available at their office all the time when they came to visit. They mentioned that mentor mothers provided counseling on HIV/ AIDS, PMTCT and ART use (97.2%). But these participants agreed on the statement mentioning mentor mothers difficulty to teach

and counsel on health issues other than HIV/ AIDS/ PMTCT (83.2%). All study participants agreed that mentor mothers were respecting them and they were trusted for confidentiality of information. Also 98.6% of participants stated that mentor mothers responded appropriately to all questions they raised, or they refer to respective MSG site coordinator health professional for further explanation for their questions. Moreover, 95.2% of study participants mentioned that if they missed their regular education and counseling session, mentor mothers call or pay a home visit to know members or their infant's condition (Table 4).

Table 4: Frequency distribution of mentor mothers' approach towards member mothers need in Addis Ababa, May 2021.

Approach of mentor mothers n=352	**Yes**	**No**
Mentor mothers are available all the time	308 [87.5]	44 [12.5]
2 . Mentor mothers are counselling well about HIV/ PMTCT	342 [97.2]	10 [2.8]
3. Mentor mothers respond me for all questions	347 [98.6]	5 [1.4]
4. Mentor mother counselling about reproductive health is not adequate.	304 [86.4]	48 [13.6]
5. Mentor mothers follow members through phone call and home visit too	335 [95.2]	17 [4.8]
6. Sometimes mentor mothers face problem toteach	293 [83.2]	59 [16.8]
7. Mentor mother discuss my issue with respective PMTCT counsellor	324 [92.0]	28 [8.0]
8. Mentor mothers keep information confidential	352 [100.0]	0
Mentor mothers have respect to HIV positive clients	352 [100.0]	0

Younger study participants proved their interest to engage in MSG and they are comfortable with counseling skill and approach of mentor mothers (r= 0.117*, p < 0.05/ p=0.029). As mentor mothers encouraged male partners attendance at MSG, married participants showed significant association with enrolment of husbands to HIV testing and counseling service (r= 0.137*, p < 0.05) and use of dual FP techniques (r= 0.815**, p< 0.01) (Table 5).

Table 5: Association of marital status with selected service utilizations among HIV positive women who enrolled in MSG, May 2021.

Marital status	**Use of FP**	**Husband HIVtesting**
Pearson Correlation	.815**	.137*
Sig. (2-tailed)	.000	.010
N	298	352

4. Discussions

Majority of study participants with HIV were between 25 and 30 years of age. Similarly, a study in rural Nigeria showed that two-thirds of participants were 21–30 years old. This similarity might be related with HIV prevalence in SSA is more among women with younger age, which worsens by underlined culture and gender-related vulnerability [21, 22].

Most of these HIV positive women in the study (47.2%) are in a low socio-economic status and more than half of the respondents (61.0%) indicated their household dependence on male partner or other family members. Even though HIV prevalence in Addis Ababa is higher among females, young and among poor individuals; it is one of the disabling factors for service consumption [7, 23, 24]. This is because as one of major components of MSG is enhancing economic strengthening programmes to empower HIV positive women and fight against HIV related stigma and discrimination.

Almost two-thirds of them (64%) are married and the two-tailed correlation test indicated that married women tend to use FP service more [Pearson correlation = 0.815**, $p<0.01$) and has associated with spousal HIV testing ($r= 0.137$ at $p< 0.05$). Albugmi study witnessed that health facility service utilization pattern was higher among married participants. This might be owing have strong social support among couples and encouraged to attend MSG and available services [25].

From 352 study participants, 66.8% of study participants were newly diagnosed with HIV in recent PMTCT service attendance. In one study, 82% of study participants initiated ART during pregnancy at a median gestational age of 24 weeks. This is related to the due attention given to PMTCT service as an entry point for HTC service [5, 26].

In this study, only 58.8% of MSG member disclosed their HIV status to another person. Low level of HIV status disclosure was seen strongly among newly diagnosed women ($r= -0.186$; $p <0.01$). The disclosure status among HIV-positive individuals in Butajira Town was 90%. The rate of disclosure is lower in this study and nearly similar with other studies owing to most women who are economically dependent on their partners and do not want to tell their HIV result and to disrupt their relationship [27].

This study revealed that PMTCT is one of the successful programmes of HIV in health facilities and the adherence pattern among clients was almost 100%. Another study in South Africa stated that 69.0% of women on ART reported perfect adherence. Such successful adherence in this study is related to clients' strong connection with mentor mothers that helped them to follow the treatment and prevention protocols strictly for the sake of their infants' health [28].

These participants also believed that the concept of MSG must be considered as a major pillar with PMTCT aiming to decrease vertical HIV transmission. MSG is an important approach to strengthen proper PMTCT service and mentor mothers provide free of charge service [29-32]. This is because those HIV positive women might face difficulty to cope with the infection and they need close follow-up to boost their hope and remain inside the umbrella of PMTCT.

Once after these women engaged to the MSG, more than 95% of members exhibited strong retention to PMTCT services. In a rural Nigeria, exposure to mentor mothers support was associated with higher odds of retention (5.9) and the odds of viral suppression (4.9). Other study indicated that retention to care was 71.7% and 14.5% of clients failed to return for a follow-up visit at health facility [33-36]. The improvement in service uptake and retention in care is related to trust and psychological connection with mentor mother and mentor mothers' shared healthcare providers' duty.

Majority of study participants (87.5%) responded that mentor mothers' are available whenever they want support. A study indicated that mentor mothers are as role models in maternal health education, HIV treatment adherence and HIV prevention for infants [37]. This is because of their commitment to support HIV positive mothers and help in minimizing the transmission of HIV to their infants.

In general, the concept of mentor mothers' involvement aims to utilize untapped community resource and they influence their enrolment to PMTCT service through sharing their real experience and life.

4.1 Comparison on Mentor Mothers Support

According to Ethiopian FMOH (2017), the MSG is premeditated to be the best strategy that supports PMTCT service successfully. As a principle, the MSG is a method that is led by experienced and voluntary HIV positive women who are volunteers to share their life experiences [29]. Mentor mothers can give psychological support by letting those HIV positive pregnant ladies on how to be comfortable during pregnancy period with HIV infection and teach them on the prevention techniques of how to give birth to HIV free child [30, 31].

Member mothers mentioned their reasons to be a member in the MSG as to have psychological support (74.4%), for education (16.2%) and 9.1% of them to FP services. A study cited that the proportion of referred HIV positive mothers needed FP was 30.4% percentage points. This is because women who enrolled to MSG in this study are newly diagnosed HIV positive pregnant or lactating mothers. They are emotionally unstable about their HIV status and they strongly want to have social support [2].

These participants also believed that the concept of MSG must be considered as a major pillar with PMTCT aiming to decrease vertical HIV transmission. The MSG is an important approach to strengthen proper PMTCT service and mentor mothers provide free of charge service. This is because those HIV positive women might face difficulty to cope with the infection and they need close follow-up to boost their hope and remain inside the umbrella of PMTCT [32].

Once after women with HIV infection engaged in the MSG, more than 95% of members exhibited strong pattern of retention. Other study indicated that retention to care was 71.7% and 14.5% of clients failed to return for a follow-up visit at the facility. The high rate of service uptake and retention in care is related with member mothers' social and psychological connection with mentor mothers and the schedule of regular education authorized them to stick on strict follow up [34, 36].

Majority of study participants (87.5%) responded about mentor mothers' availability whenever they want any

support. It was also indicated that mentor mothers are as role models in maternal health education, HIV treatment initiation, adherence, and retention, HIV prevention for male partners and infants, and couple HIV disclosure. This is because of their commitment to support HIV positive mothers and help in minimizing the transmission of HIV to their infants [37].

Majority (97%) of mentor mothers provided regular counseling about HIV/ AIDS, PMTCT and ART use and 99.1% of member women had proper viral suppression. In a rural Nigeria, exposure to mentor mothers support was associated with higher odds of retention (5.9) and the odds of viral suppression at six-month postpartum were higher (4.9) [35]. This is because structured mentor mothers empower HIV positive women to have strong adherence for their ART, medical care and infant follow up.

Around 95.2% of study participants mentioned that mentor mothers are highly trusted by HIV positive mothers to influence their attitude about HIV, attendance to health service and contraceptive usage. A study brought up that 85.7% of women were motivated to have HIV testing. It can be concluded that intimacy and regular coaching from peer supporter has significant influence to bring mutual understanding and can change the attitudes and intentions to utilize HIV services [39].

This study mentioned that MSG targets on strengthening ART and medical care adherence among women with HIV infection. According to South Africa m2m founder report, mentor mothers facilitate counseling sessions on PMTCT and exposed infant care for each woman in health institution. This is because the aim of establishing MSG I to increase PMTCT service adherence in the context of HIV prevention and treatment, FP, positive living and child health-related [36, 40].

In general, mentor mothers are community resources and key implementers in PMTCT service delivery point in health facilities of Addis Ababa.

5. Conclusion

In this study, findings showed that HIV positive mothers who enrolled in MSG voluntarily had chance of enrolment in peer support, which support them to utilize comprehensive health services for themselves, infants and family members at respective health facilities. These study participant mothers benefited from regular education and counseling service that was given by mentor mothers. So that their engagement in MSG helped them to receive various services including pre-delivery and post-natal cares, FP, STI screening and treatment as well as exposed infants prevention and treatment services.

6. Authors contribution

Meaza Getahun Sileshi was responsible for overall research protocol development including proposal development, study place and participants' selection, recruitment of data collectors, data management and report writing. Whereas, Professor Lebitsi Maud Modiba is advisor of this research and participated in all phases of research work from research title selection till report writing. Both authors have equal responsibility for this article.

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