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Journal

Western Journal of Nursing Research, 35(7)

ISSN

0193-9459

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Publication Date

2013-08-01

DOI

10.1177/0193945913482050

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Peer reviewed



Published in final edited form as:

West J Nurs Res. 2013 August ; 35(7): 867–883. doi:10.1177/0193945913482050.

Impact of Asha Intervention on Stigma among Rural Indian Women with AIDS

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Abstract

Rural women living with HIV/AIDS (WLA) in India face multifarious challenges which affect access to antiretroviral regimens and management of HIV/AIDS. The purpose of this pilot study, using cluster randomization, is to compare the effectiveness of the Asha-Life (AL) intervention, delivered by HIV-trained village woman, Asha (Accredited Social Health Activist), with a Usual Care (UC) group on reduction of internalized stigma and avoidant coping among 68 women living with AIDS (WLA) in rural India over a six-month period. The findings demonstrated that participation in the AL intervention was associated with significant reductions in internalized stigma and the use of avoidant coping strategies at follow-up. The findings of our study are promising in terms of the role rural village women (Asha) may play in reducing internalized stigma and avoidant coping in the lives of rural women living with AIDS in India.

Keywords

HIV/AIDS; Health Care Delivery; Women's Health; India

For over two decades, HIV/AIDS-related stigma has been recognized as the third phase of the AIDS pandemic and a facilitator for the transmission of the HIV virus (Mawar, Saha, Pandit, & Mahajan, 2005), leading to lack of testing for HIV and non-adherence to antiretroviral (ARV) medications (Simbayi et al., 2007). India faces an exponential growth in HIV infection in women which may be made more complicated by widespread poverty, poor literacy and social inequalities based on caste and gender (Joseph & Bhatti, 2004). Nearly 39% of women are affected by HIV/AIDS in India National AIDS Control Organization (NACO, 2011).

Andhra Pradesh (AP) reportedly has a higher prevalence of HIV cases than India as a whole (1.05% vs. 0.36%) (Pandey et al., 2009). Specifically, rural AP has between 420,448–651,694 people living with HIV/AIDS (PLWHA) (Pandey et al., 2009). Despite advances in treatment, PLWHA continue to face stigma and discrimination (Apinundecha, Laohasiriwong, Cameron, & Lim, 2007) which often lead to adverse physical and mental health consequences (Nyamathi et al., 2011). Globally, stigma negatively impacts employment, (Rao, Angell, Lam, & Corrigan, 2008) familial reputation (Feng, Wu, & Detels, 2010) and reluctance to be tested for HIV (Sivaram et al., 2009).

Women Living with AIDS, Stigma and Avoidant Coping

HIV-stigma may be rooted in the belief that the burden of transmission is on the bearer for having engaged in risky behavior (Lee, Kochman, & Sikkema, 2002). In India, women bear

the brunt of stigma, have little autonomy or decision-making capacity, have poor education, poor literacy, minimally employed, and lack basic knowledge of HIV transmission along with having limited power in sexual decision-making (Joseph & Bhatti, 2004). Thus, women become prime targets for acquiring HIV heterosexually. Most of the family resources are spent for HIV/AIDS treatment on the husband, with very little left for the women or children who will eventually become AIDS patients. Despite being HIV positive, women often find themselves with minimal time to devote to their own health problems, including seeking HIV/AIDS treatment or taking ARV medication consistently.

The way people cope with HIV-related stigma influences mental health (e.g. depression, self-esteem and anxiety) (Varni, Miller, McCuin, & Solomon, 2012). In a study among persons found to be HIV positive (N=200, 18–64), felt stigma predicted depression. Further, persons who reported higher levels of anxiety and depression were more likely to have engaged in higher levels of disengagement coping as compared to their counterparts who reported less anxiety and depression (Varni et al., 2012). In a South African study investigating stigma among HIV positive men and women (N=1063), data suggest that internalized stigma predicted depression (Simbayi et al., 2007).

In a cross-sectional study conducted by Nyamathi and colleagues (2011) among WLA (N=68), internalized stigma was experienced by 66% of WLA in India and was manifested as a belief that women were paying for sins committed. Further, stigma was found to be linked to avoidant coping as almost two thirds of women avoided feeding children, or did not want to hold a new infant (Nyamathi et al., 2011). Significant positive associations were also found between avoidant coping and internalized stigma ($p<.001$), felt stigma ($p<.001$), vicarious stigma ($p<.001$) and enacted stigma ($p<.05$). It is plausible that hearing stories of enacted stigma leads to disclosure avoidance (Nyamathi et al., 2011).

Perceptions of community stigma and having heard of other PLWHA experiencing stigma and discrimination may make individuals less likely to disclose their status. Stigma can prevent disclosing HIV seropositivity along with ARV medication adherence (Wolitski, Pals, Kidder, Courtenay-Quirk, & Holtgrave, 2009). The use of such disclosure avoidant strategies is associated with psychological distress, especially depressive symptoms (Steward et al., 2011).

India has recently launched the National Rural Health Mission (NRHM) in 2005 (Singh, Singh, Ahmad, Kumari, & Khanna, 2010), targeting the most underserved populations of rural women and children with the support of Asha or lay village women, who have focused primarily on promoting the health of pregnant and parenting women and infants by promoting nutrition, basic hygiene, sanitation, clean water, and providing health information, no work has been conducted on promoting the health of rural WLA. In a study of the role of Asha in Uttar Pradesh, (Srivastava et al., 2009) authors found that properly trained and supervised, Asha functioned very effectively in connecting clients with health care. However, there remains an ongoing need to develop interventions targeting rural WLA in India at increased risk for HIV/AIDS.

The theoretical framework for the intervention was the Comprehensive Health Seeking and Coping Paradigm (CHSCP) (Nyamathi, 1989). For nearly three decades, the CHSCP has been applied to research studies focused on understanding HIV, and interventions focused on enhancing completion of hepatitis vaccine and TB chemoprophylaxis (Nyamathi, Christiani, Nahid, Gregerson, & Leake, 2006; Nyamathi, Dixon, Wiley, Christiani, & Lowe, 2006) among homeless and impoverished women and men.

The CHSCP is composed of antecedent, mediating and dependent domains. Variables in the antecedent domain include socio-demographic factors and health history, which includes

general medical and psychiatric history and health care access and utilization. Mediating components include social and cognitive factors, behavioral and psychological factors and treatment factors. To date, the literature resounds with cross sectional studies detailing the effects of the pandemic on urban and presently rural districts in India; however, there is a dearth of literature which focuses on reducing internalized stigma and avoidant coping among rural WLA. Both of these variables can be considered mediating and outcomes.

The aim of this study was to assess the impact of an intervention to reduce internalized stigma and avoidant coping in a sample of rural WLA in India who received the intervention program (Asha-Life [AL]) compared with a usual care (UC) program. The hypothesis tested was that participants in the AL intervention will report a greater decrease in internalized stigma and avoidant coping at six-month follow-up as compared with participants in the UC program.

Methods

Design

A total of 68 rural Indian WLA participated in a prospective pilot study using cluster randomization; data was collected from August 2009 to March 2011. The women were recruited from two high prevalence HIV/AIDS villages randomly selected from a pool of 16 villages in rural Andhra Pradesh that were demographically alike. Each clinic was served by a Public Health Center (PHC). One randomly-selected village in Kovur engaged the intervention group, while the second located in Kotavalur engaged the usual care group. The study was designed to determine the impact of having HIV-trained village woman, Ashas (Accredited Social Health Activists), deliver care to WLA enrolled in the AL program, compared to WLA enrolled in the UC group. Human Subjects Protection Committee clearances were obtained both in the US and in India by the Indian Council for Medical Research and the Health Ministry Screening Committee 2008.

Sample and Setting

There were several inclusion criteria for this study which included being a rural women living with HIV/AIDS (WLA), being between the ages of 18–45, and, as this study was focused on adherence to ART, women needed to be on ART for a minimum of three months. WLA were excluded if they had a CD4 cell count less than 100. Two rural villages in AP that were demographically similar were randomly selected from 16 villages; both were serviced by a Public Health Center (PHC). One of the two study villages was then randomly selected to engage the intervention group (Asha-Life [AL]), while the second engaged the usual care (UC) group.

The distance from the intervention village to the district hospital is approximately 24 miles, and from the control village, it is 28 miles. Public transportation in the form of bus or auto rickshaw were options for the women. Approximately 91 women were screened and 23 were not eligible due to the following: (a) not being on ART; (b) not having a CD4 count less than 100. None of the intervention or UC participants were lost to follow up (Figure 1).

Asha-Life (AL) Intervention

The participants who were randomized to the Asha-Life (AL) intervention received six program-specific sessions in sequence lasting 45 minutes. The sessions, conducted by expert physicians, nurses, spiritual leaders, and the project director, included the following topics: a) HIV/AIDS and dealing with the illness; b) learning about ART and ways to overcome barriers; c) parenting and maintaining a healthy home environment; d) how to improve coping, reduce stigma and care for family members; e) basics of good nutrition and easy

cooking tips; and f) benefits of engagement in a life skills class, such as computer skills, marketing, and embroidery. In addition, the WLA received monthly supplies of 1 kg of Urad dal [black gram] and 1 kg of Toor dal [pigeon pea], and bus tokens to the hospital or clinic.

The primary role of the intervention Asha was to visit the four to five WLA assigned to them weekly for 15 – 60 minutes, monitor barriers to ART adherence, and provide assistance to mitigate any barriers they faced in accessing health care or the prescribed treatment. Assistance included accompanying the WLA to the district hospital, or to the psychologist, and counseling them about coping strategies to deal with side effects, such as discrimination. The AL Asha were trained to inquire about side effects, provide basic education and counseling, promote healthy life style choices, and link WLA with community resources to match health needs.

Usual Care (UC) Program

The UC participants received matched sessions in terms of number and length of time to the AL program. The UC sessions generally included topics 1–3, as described for the AL program, followed by three additional sessions which were essentially question and answer type sessions. Similar experts provided the program. In addition, the WLA received monthly supplies of yellow chana dal [chick peas/month] due to the general malnourished status of rural WLA. In this program, which served as the control, the WLA received standard education and some nutritional supplements. The UC staff did not assist WLA to get to the government hospital or to overcome barriers to care. The primary role of the UC staff were to visit the 8–10 WLA assigned to them weekly, monitor barriers to ART adherence, inquire about side effects, and provide basic education. They were not trained to fill the same supportive role as the intervention ASHA.

Procedure

In each of the village PHCs, approved flyers were posted in the large waiting area where patients waited to be called to see the physicians or nurses. If there was interest among a potential WLA, that individual contacted the research staff for further information about the study. After a more detailed description was provided about the study, and all questions answered, interested WLA signed the first informed consent. This led to the first brief two-minute structured questionnaire that was administered by the research staff and inquired about age, education and other sociodemographic and health characteristics, including HIV and ART status; all of which determined eligibility for the study and provided basic sociodemographic information on refusals.

If WLA were eligible, continued to be interested, the research staff administered a second informed consent which permitted assessment for CD4 levels via venipuncture in the PHC. Within four days, the WLA met with the research staff to discuss the test results, and if the CD4 cells were not less than 100, the final informed consent was signed and the baseline questionnaire was administered. WLA were then enrolled in the intervention. All respondents were paid \$5 for completing the screening procedures, \$10 for returning for test results and completing the baseline questionnaire (same day), \$10 for each session and \$20 upon completion of the six-month questionnaire.

Asha and UC Research Staff

Lay village women who observed the advertisement about the hiring of Asha and other research staff and were interested, were selected based on specific criteria. These included being educated beyond high school, wanting to care for WLA, and living in a nearby village as the participating WLA. A team of experts including the project director, physician and social scientist investigators and local research physician trained the four Asha who worked

in the intervention group over a three-day period. A similar process occurred for the UC staff.

Instruments

Several of the instruments have been previously tested with WLA in the US (Rotheram-Borus, Stein, & Lin, 2001; Whitbeck, Hoyt, & Bao, 2000) and in India (Ekstrand, Chandy, Gandhi, Stewart, & Singh, 2006).

Socio-Demographic information captured age, religion, education, employment status, marital status and number of children.

Health History was obtained by self-report on number of health visits in the last six months, time since AIDS diagnosis and number of months taking ART. The number of months on antiretroviral treatment (ART) were also obtained from the clinic card each woman possessed.

Internalized Stigma which was assessed by a 10-item scale to the extent which respondents believe that, as HIV-infected people, they deserve to be stigmatized. It is one of four stigma scales developed by (Ekstrand, Bharat, Ramakrishna, & Heylen, 2011) and colleagues (Steward et al., 2011). The items were based on previous research (Berg & Arnsten, 2006; Chesney, 2006; Simoni et al., 2006) and were subsequently modified on qualitative interviews in India (Bharat, Aggleton, & Tyrer, 2001) to insure that the content was relevant and appropriate. Each item has a four-point response format varying from (1) not at all to (4) a great deal. For example, an item is: "How much do you feel that you deserve to have HIV?" The reliability for the scale was .89 and the scale score for internalized stigma was constructed by taking the mean of the individual item responses. Internalized stigma change over time was measured by deducting the 6 months score from the baseline score. A positive score indicated reduction in stigma over time.

Avoidant Coping was assessed based on a "Disclosure Avoidance" scale (Steward et al., 2008), and amended to meet the needs of the population, the resulting 8-item scale assessed coping strategy frequency in an effort to not disclose HIV serostatus which may be illustrated by hiding their HIV medications and describing their illness as not being HIV/AIDS. All the responses varied from (1) never to (4) often. Cronbach's alpha for this scale was .90. The mean of individual item responses was constructed by taking the mean of the individual item responses. A change over time was measured by deducting the 6 months score from the baseline score. A positive score indicated improvement over time.

Depressive Symptomatology was measured by an interval/ordinal data type using the Center for Epidemiologic Depression Scale (CES-D), a 20-item, 4-point continuum instrument which refers to the frequency of symptoms during the last week. There is a 0–60 score range and a score of 16 or higher indicates psychiatric evaluation (Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977). Depressed mood is designated when WLA have a score of at least 16. In terms of psychometrics, the reliability and validity has been used with varied populations (Radloff, 1977). Further, for WLA there is a .91 internal consistency for the scale.

Data Analysis

As this was a pilot study, the sample size was calculated to detect a .5 standard deviation difference between group means, with power almost .8, using an alpha of .10 (two-tailed test). Continuous variables were assessed for normality and baseline variables were contrasted between programs using chi-square and t tests, depending on the underlying distributions. Paired t tests were used to assess change in internalized stigma and avoidant

coping from baseline to six months for the intervention and control groups. Associations between baseline variables that differed between programs at $p < .15$ and change in internalized stigma and avoidant coping were then examined with *t* tests and correlations to identify potential confounders of program effects on the outcomes. Ordinary least squares regression analysis was used to determine the effect of a dummy variable representing the intervention group on change in internalized stigma and avoidant coping separately, controlling for baseline values of the outcome variables and potential confounders that were associated with the outcomes at $p < .15$. Multicollinearity was assessed for the regression models and model *r*-squares were computed. Analyses were conducted with SAS 9.1.3.

Results

This study was conducted with 68 WLA, evenly divided between the intervention and UC groups, who completed baseline and six-month follow-up surveys. The women's mean age was 31 years (+ 5.3) and just over half (52%) were married. About one-fifth (22%) had completed four or more years of school, with completion rates differing between the AL and UC programs (32% vs 12% respectively). The majority (65%) of the sample was Hindu, but their representation differed between the AL and UC women (44% vs. 85%, respectively). About half of the sample (49%) had been diagnosed with HIV 47 months prior to the study; about two-thirds of the AL participants had this longer disease profile compared to one-third (32%) of the UC participants. Depressed mood (CES-D ≥ 16) also characterized a little over half the sample (54%), being more prevalent among AL women (71%) than UC women (38%) (Table 1). As disclosed in the data analyses section, baseline differences revealing the AL women to be more educated, but reporting greater depressive symptoms, longer time on ART, and less likely to be Hindu, were controlled statistically. Table 2 provides descriptive statistics on the outcome means and standard deviations for each group.

Unadjusted Associations with Outcomes

Associations between baseline variables that differed between the two programs at $p < .15$ and the outcomes; namely change in internalized stigma and avoidant coping are presented in Table 3. These outcomes are also presented for the two programs. As shown, reductions in internalized stigma and the use of avoidant coping strategies from baseline to 6 month follow-up were associated with participation in the AL intervention, being non-Hindu, having been diagnosed with HIV more than 47 months ago and baseline depression. There was also a trend for mothers to have a greater improvement in avoidant coping than women without children. In correlation analyses (data not shown), there was a similar trend ($p = 0.09$) for older age to be associated with change in internalized stigma and older age was related to change in avoidant coping ($p < .05$). While the CES-D was related to a decrease in internalized stigma and avoidant coping at the .05 level, it did not change the program effect.

Multivariate findings

The positive associations between participation in the AL intervention and reductions in internalized stigma and avoidant coping persisted in multiple linear regression analyses (Table 4). Additionally, baseline values of internalized stigma and avoidant coping were strongly linked to change in these respective measures over time, so the higher the baseline score, the greater the reduction. Older age had a weak relationship with change in avoidant coping. Unlike the unadjusted analyses, the adjusted regression analyses indicated that Hindus had greater improvement in avoidant coping than non-Hindus and women with children had smaller improvements in avoidant coping than those without children. Model *r*-squares were .86 and .91 for the changes in internalized stigma and avoidant coping, respectively.

Discussion

The results of this pilot study revealed that participants of the AL program reported significant reductions in internalized stigma and avoidant coping at six month follow-up. Moreover, higher baseline values of these variables were associated with greater reduction at follow-up. These findings are important as our previous research has demonstrated that stigma can lead to both psychological distress (Steward et al., 2011) and delay in health-care seeking (Steward, Bharat, Ramakrishna, Heylen, & Ekstrand, 2012) in South Indian populations living with HIV. More importantly, stigma is associated with patient compliance to ART (Nyamathi et al., 2011); thus stigma can negatively impact treatment success and result in the development and transmission of drug-resistant strains.

The high baseline rates of internalized stigma, avoidant coping and depression in this sample suggest that WLA appear to have accepted and internalized societal norms and prejudices toward persons living with HIV and AIDS, and as a result, experience a great deal of psychological stress. Our baseline finding on types of stigma experienced in this sample of rural Indian WLA confirm these findings as we found high rates of enacted stigma (demonstrated by others) which confirms the hostile living environment these women both perceived from the community as well as healthcare providers (Nyamathi et al., 2011). Furthermore, at baseline, we found high levels of heard, felt (perceived) stigma, and internalized stigma – the extent to which persons believed they should be stigmatized. This supports results reported previously in India (Steward et al., 2011) as well as with results reported in other resource-limited settings (Nyamukapa et al., 2010; Wagner et al., 2010).

After controlling for intervention status, finding revealed that reductions in internalized stigma and avoidant coping were also associated with higher baseline levels of depression and having been diagnosed with HIV for a longer time. The women also reported frequent use of different strategies to avoid disclosing their HIV status to others. We surmise that this may be partly due to the fact that the intervention addressed both depressive symptoms and taught alternative coping skills, besides avoidance. This assumption is strengthened by the fact that in our baseline study of these WLA, depressive symptoms were apparent among 54% of our sample and found to be significantly related to disclosure avoidance coping strategies (Nyamathi, Salem, Meyer, Ganguly, Sinha, Ramakrishnan, 2012). Clearly, as severe depression can negatively impact one's health and adherence to ART (Sarna et al., 2008), interventions that impact both internalized stigma and avoidant coping are critical.

Findings of this study also revealed that women who were Hindu had greater improvement in avoidant coping while change in avoidant coping was less among women with children. While these findings are unique in the literature, an earlier paper of the same sample indicated that adherence to ART was likewise associated with Hindu religion, as well as perceived ART benefit, and not being depressed (Nyamathi, Salem, Meyer, Ganguly, Sinha, Ramakrishnan, 2012). These findings point to the importance of Hindu religion in having an impact on both improvement in avoidant coping as well as adherence to ART. Furthermore, having children may provide additional challenges for women in terms of improving their coping strategies.

Limitations of the study include restriction to a small sample in rural India and the conduct of a pilot study whose sample was collected using cluster randomization at the village level. Thus, generalizability to urban women and the larger group of rural women is limited. Furthermore, regression to the mean may have played a factor in regression findings in relationship to depressive symptoms. Thus it is plausible that regression findings were not entirely related to the impact of the intervention.

Conclusions

The findings of this study reveal that the AL intervention, delivered by lay health women (Asha), significantly reduced internalized stigma and avoidant coping among rural WLA at six month follow-up. As this intervention has likewise resulted in significant improvements in adherence, CD4 levels and other health parameters, and reduction in depressive symptoms, this intervention now needs to be tested in a large scale RCT or in a cluster RCT enrolling multiple villages, to examine effects on different population subgroups, and to identify specific mediators of change. We believe that our findings are promising and that receptivity of ASHA by WLA was positive. This easily sustainable intervention can impact rural communities and will be of interest for healthcare professionals and policy makers alike in an effort to promote resources and proactively support WLA.

Acknowledgments

I would like to thank Dr. P. Suresh for serving as the research study physician and Cindy James for formatting and manuscript preparation. Funding was provided by the National Institute of Mental Health Grant Number MH82662.

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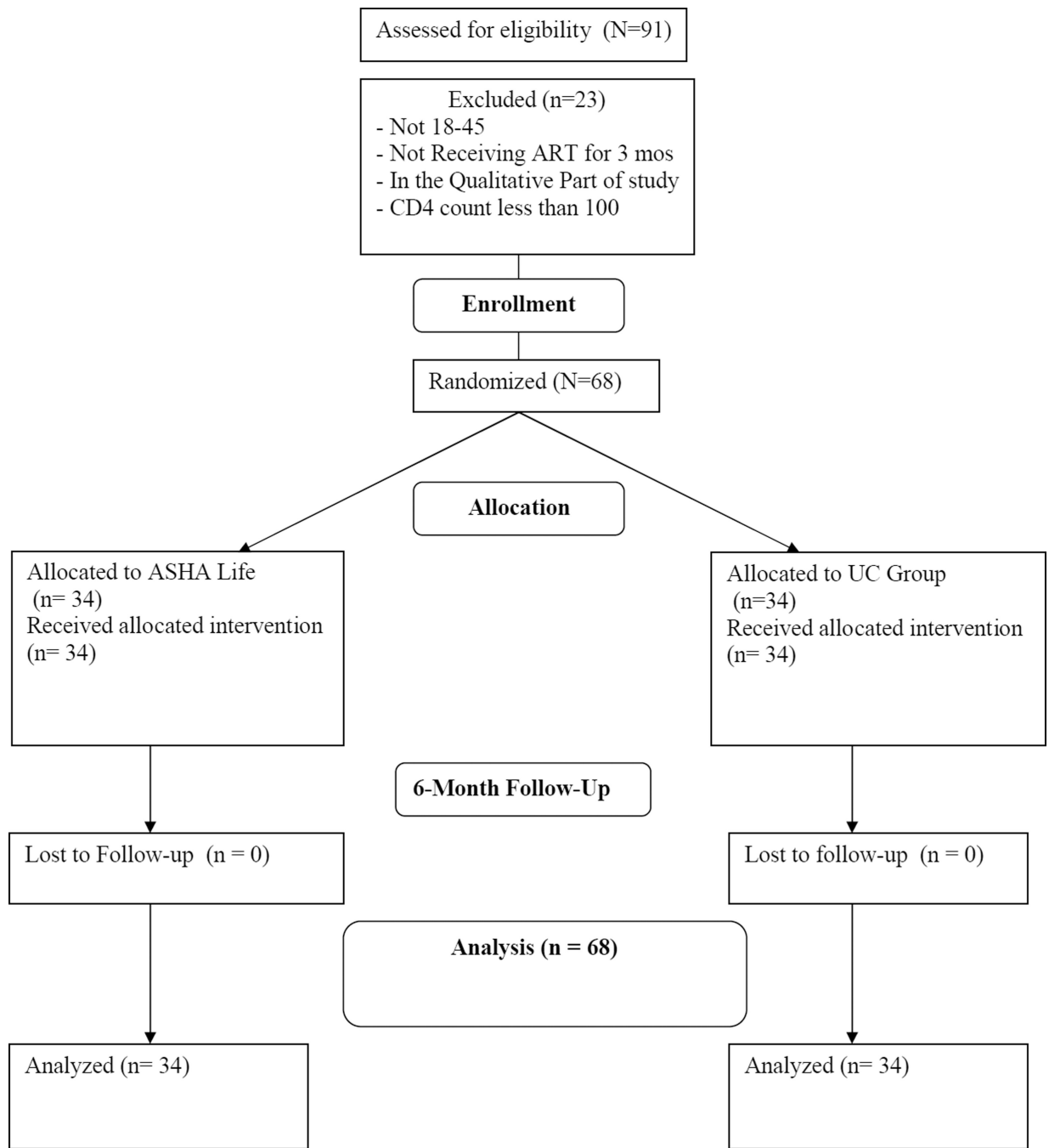


Figure 1.

Table 1

Sample Characteristics by Program and Overall (N=68)

Baseline Variable	Asha-Life		Group		Usual Care		Group		Total N		Total %		p value ^a
	N	%	N	%	N	%	N	%	N	%	N	%	
Any Children	32	94.1	27	79.4	59	86.8	59	86.8	59	86.8	59	86.8	.074
Married	15	44.1	20	58.8	35	51.5	35	51.5	35	51.5	35	51.5	.225
At Least 4 Years of School	11	32.4	4	11.8	15	22.1	15	22.1	15	22.1	15	22.1	.041
Hindu Religion	15	44.1	29	85.3	44	64.7	44	64.7	44	64.7	44	64.7	.001
More than 47 Months since HIV diagnosis	22	64.7	11	32.4	33	48.5	33	48.5	33	48.5	33	48.5	.005
Depressed Mood ^b	24	70.6	13	38.2	37	54.4	37	54.4	37	54.4	37	54.4	.007
Baseline Variable (Range)	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
Age (20–45)	32.3	5.3	30.1	5.2	31.2	5.3	31.2	5.3	31.2	5.3	31.2	5.3	.102
CD4 Level (127 – 1071)	439.1	217.6	447.5	260.0	443.3	238.0	443.3	238.0	443.3	238.0	443.3	238.0	.885
Months Taking ART (0–86.8)	25.6	20.5	19.1	13.8	22.3	17.6	22.3	17.6	22.3	17.6	22.3	17.6	.126
Health Visits Past 3 Mos (2–15)	7.7	3.5	7.4	3.6	7.5	3.5	7.5	3.5	7.5	3.5	7.5	3.5	.732
Internalized Stigma (1–4)	3.2	0.8	3.6	0.5	3.4	0.6	3.4	0.6	3.4	0.6	3.4	0.6	.051
Avoidant Coping (1–4)	3.2	0.7	3.3	0.8	3.2	0.6	3.2	0.6	3.2	0.6	3.2	0.6	.526

^aChi-square or t test for program differences

^bBased on a CES-D score of 16 or greater

Table 2
Internalized Stigma and Avoidant Coping at Baseline and Six Months By Program

	Asha-Life Program					
	Baseline			Six Months		
	Mean	SD	Range	Mean	SD	Range
Internalized Stigma	3.25	0.8	1.5–4	1.11	0.1	1–1.4
Avoidant Coping	3.16	0.7	1.8–4	1.09	0.2	1–1.6
	Usual Care Program					
	Baseline			Six Months		
	Mean	SD	Range	Mean	SD	Range
Internalized Stigma	3.55	0.5	2.2–4	3.43	0.7	1.4–4
Avoidant Coping	3.28	0.8	1–3.9	3.36	0.6	1.6–4

Table 3

Bivariate Associations of Selected Variables with Changes^a in Internalized Stigma and Avoidance Coping (N = 68)

Baseline Variable	Internalized Stigma Change		Avoidance Coping Change	
	Mean	SD	Mean	SD
Program				
Asha-Life	2.13 ^{***}	.08	2.05 ^{***}	.08
Usual-Care	0.12	.08	-0.09	1.0
Children				
Yes	1.19	1.2	1.09	1.3 ⁺
No	0.68	1.4	0.21	2.0
4 years of School				
Yes	0.97	1.2	1.24	1.3
No	1.17	1.3	0.89	1.4
Hindu Religion				
Yes	0.81 ^{**}	1.2	0.66 [*]	1.4
No	1.67	1.1	1.56	1.2
More than 47 Months since HIV Diagnosis				
Yes	1.48 ^{**}	1.1	1.34 [*]	1.1
No	0.74	1.3	0.58	1.6
Depressed Mood ^b				
Yes	1.51 ^{**}	1.2	1.40 ^{**}	1.2
No	0.66	1.2	0.46	1.5

⁺ p < .10

^aBaseline score minus month six score

^bBased on a CES-D 16

* p < .05, t test for difference in change score

** p < .01, t test for difference in change score

p < .001, t test for difference in change score

†
p < .10, t test for difference in change score

Table 4
 Linear Regression Results for Change^a in Internalized Stigma and Avoidance Coping

Baseline Variables	Internalized Stigma Change (N =67)			Avoidance Coping Change (N=66)		
	Beta ^b	s.e.	p value	Beta ^b	s.e.	p value
Asha-Life (vs. Usual Care)	2.25	.16	.001	2.40	.14	.001
Internalized Stigma at baseline	0.97	.10	.001	---	---	---
Avoidance Coping at baseline	---	---	---	1.07	.08	.001
Age	0.01	.01	.225	0.02	.01	.054
Hindu Religion	0.14	.14	.319	0.25	.13	.051
Have Children	---	---	---	-0.44	.17	.014
Had HIV for > 47 Months	0.24	.13	.073	0.08	.12	.468
Depressed Mood	0.002	.13	.903	-0.14	.12	.256

^aBaseline score minus month six score

^bUnstandardized coefficients

--- not used in the given model