

# Process and Outcome Evaluation of “Living with X”: A Body Mapping Workshop in the Time of HIV and AIDS

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**Abstract**— In the US alone, 1.2 million people were diagnosed with HIV in 2013 (Centers for Disease Control and Prevention [CDC], 2015). People living with HIV experience stigma-related disadvantages that affect their quality of life. Stigma manifests in multiple forms (e.g. prejudice and discrimination) (Mahajan, 2008). Consequently, stigma contributes to barriers for effective intervention, prevention, treatment, and care for PLHIV (International Center for Research on Women (ICRW), 2015). In this pilot study, the researcher implemented a body mapping workshop for clients of AIDS Athens. Through a mixed methods of observation, interview, and questionnaire for data collection, the result of the process and outcome evaluation of the body mapping workshop showed that: (1) the intervention was implemented as intended; (2) the workshop can be replicated in the Athens setting; (3) the workshop can be improved upon for future delivery (4) the workshop did not meet its intended outcome objectives (an increase of resilience and self-esteem scores of 10% post-intervention); (5) all participants indicated good to high level of satisfaction with the workshop.

**Keywords**—HIV; body map; stigma; self-esteem; resilience

## I. INTRODUCTION

There were approximately 35 million people living with HIV (PLHIV) worldwide in 2013 [37]. In 2014, the numbers of people who were infected by HIV increased to 36.9 million cases [33]. In the United States of America alone, 1.2 million people were diagnosed with HIV in 2013 [6].

Since the outbreak in 1981, PLHIV have faced physical hardships related to the weakened immune system and stigma-related mental health issues. Stigma manifests in multiple forms (e.g. prejudice and discrimination) in different countries and in different cultures either societally or intrapersonally [20]. Consequently, stigma contributes to barriers for effective intervention, prevention, treatment, and care for PLHIV [15].

Stigma generally refers to “being marked” in negative way indicative of illness, contagion, or an immoral status of a person. Stigma marks an individual with a discrediting label, making them less respected and sometimes considered less than human [13]. Studies show that these negative perceptions towards PLHIV occurred in the health care setting and that

PLHIV experienced stigma and discrimination from healthcare providers in several forms (e.g. refusal of treatment, minimum care, avoidance of contact, and verbal aggression) [9;23;27;34]. Consequently, the negative events trigger patients to feel inferior; demotivated to live healthy lives; and experience resentment and stress [23]. Healthcare providers who have prejudiced beliefs or lack of respect worsen negative attitude towards PLHIV [27;34]. Furthermore, society tends to view HIV infection as a condition that occurs only in certain groups of the population such as drug users and gay men because they engage in ‘immoral’ behavior [30]. These forms of stigma result in a greater risk of emotional disturbance such as depression, shame, low self-esteem, and hopelessness. People who have been infected by HIV can internalize their HIV status and be made to feel they deserve the disease and accept negative labels put on them as truth [4;14;18;30].

Internalized stigma can be defined as negative self-concept, low self-esteem (feeling inferior to others), feeling shame and embracing false ideas about oneself for living with HIV [3;4]. Internalized stigma negatively influences the affective and behavioral health and wellbeing of PLHIV, negatively effecting adherence to medical care and treatments [8;35]. This phenomenon highlights an area of importance for an effective intervention to be implemented to help PLHIV improve their quality of life.

Chambers et al. [7] identified strategies such as “social support, education, self-efficacy, resilience strategies, and social and individual advocacy” (p. 13) to address stigma. He emphasized that social support helped people with HIV to learn to live their lives with the virus, stay adherent to medication, be involved in support groups, and feel less alone. Social support improves a person’s resilience to stigma associated with HIV by helping to manage emotions and solve problems [9]. Moreover, joining support groups for PLHIV increased self-confidence, which reduced self-stigma and improved resilience [21]. Meanwhile, Treves-kagan et al. [29] suggested that to reduce stigma in healthcare settings, it was crucial to increase unconditional acceptance of HIV positive individuals, have general primary care serve HIV patients, and facilitate a friendly health care environment for men and

youth. In addition, campaigns to remove blame might help reduce stigma among vulnerable groups [17].

Another intervention that can facilitate improvement of mental and emotional conditions due to stigma is art therapy. Art therapy is recognized as an effective tool for enhancing communication and self-esteem [5]. One form of art therapy that has been used to help PLHIV tell their stories is body mapping, which was originally conducted in South Africa [28]. This current study adapted and implemented a body mapping intervention to help PLHIV in Athens, Georgia with the goal of reducing internalized stigma by improving self-esteem and resilience. Therefore, the objective of this study is to evaluate the process of the implementation of the intervention (body mapping) and the outcome it produced in increasing self-esteem and resilience for PLHIV. The purpose of this evaluation is to: (1) gain new knowledge about the intervention; (2) identify areas of the existing intervention that need improvement; and (3) determine the efficacy of intervention by providing evidence of contributions to outcomes.

## II. PROGRAM DESCRIPTION

### A. Body Mapping

The name of this intervention is “Living with X”: A Body Mapping Workshop in the Time of HIV and AIDS. Body mapping is defined as an art-based activity of creating a human-size body image called a body map using drawing, painting, colors, pictures, and words to creatively visualize aspects of one’s life, body experiences, emotional and mental state, and one’s stories of the world one lives in [2;11]. Body mapping therapeutically helps people to tell their stories from the images, symbols, or pictures they put in their body maps. One’s body map meaning belongs to the creator because the significance of the body map can only be drawn from the creator’s experiences [2;11]

Body mapping was originally implemented in 2002 as a method for helping women living with HIV in South Africa to document their stories before they died. It was named the *Memory Box Project* which was designed and facilitated by Jonathan Morgan, a clinical psychologist, and Jane Solomon, a designer and trainer from South Africa [11;28;36]. Jane Solomon later modified and developed this activity into body mapping with narrative processes within it. Then, with support from REPSSI (the Regional Psychosocial Support Initiative), an organization that also works to enhance the psychosocial well-being of PLHIV in South Africa, Solomon created a manual named “*Living with X*” *A Body Mapping Journey in the time of HIV and AIDS*. Since then, body mapping has been adopted and implemented as a useful tool for treatment and support, research, advocacy, intergenerational dialogue, team building, art making, and biography [11;28].

In this pilot study, the researcher adopted and modified the intervention from the manual and implemented it for clients of AIDS Athens (a local community resource center to empower PLHIV). AIDS Athens is a non-profit organization founded by Athens residents in February 1987 and its purpose is to serve people who are infected and affected by HIV/AIDS through

supportive service, outreach and education in 10 counties of the Northeast Health District of Georgia [1].

The intervention aimed to reduce internalized stigma on PLHIV by increasing their self-esteem and resilience through the body mapping workshop. This intervention strived to provide a safe space for the participants to reflect, discuss, and develop insight about coping with emotional and physical adversities while living with HIV.

### B. Setting of the Intervention

The intervention was implemented on April 2, 2016 in Athens, Georgia. It was conducted as a seven-hour workshop. People living with HIV were the target participants as they directly experienced the negative impact of stigma due to their HIV status. A body mapping workshop, group discussion, and storytelling session were conducted during the seven hours of intervention. The participants were provided a detailed description for each activity at the beginning of the workshop. A doctoral student in counseling psychology facilitated the group and the researcher acted as a co-facilitator. The group was guided by a modified manual, which the researcher adapted from Solomon’s facilitator’s guide [28]. The intervention was held at the UGA Health Sciences Campus.

### C. Program Logistics

This intervention recruited eight participants. Inclusion criteria were PLHIV of any gender aged over 18 years old. However, only seven of the eight recruited participants joined the intervention on the implementing day. The intervention was designed so participants were able to interact in a comfortable way akin to a support group meeting. The researcher provided all supplies needed for the workshop such as painting materials, refreshments, and lunch. Participants were recruited via AIDS Athens through flyers and in-person meetings during case management office hours. The intervention was conducted as follows:

- 1) The facilitator and co-facilitator opened the intervention by introducing the process of the workshop and allowing participants introduced themselves. Informed consent forms were given to the participants to sign. Participants were encouraged to raise any concerns to the facilitator. Then, participants completed pre-test resilience and self-esteem scales.
- 2) Participants completed the body mapping process in 16 steps/exercises guided by the facilitators in accordance with the manual. At the end of the 16 steps/exercises, each participant presented their body maps and received positive feedback from other participants. Between the exercises, there were two educational sessions about resilience and self-esteem that included a group discussion.
- 3) Last, participants completed post-test resilience and self-esteem scales, as well as completing a satisfaction questionnaire.

In-person interviews related to process evaluation research questions were conducted within one week after completion of the intervention.

**D. Facilitators**

One facilitator and a co-facilitator led the workshop. The facilitator was recruited based on his background and experience in working with PLHIV and his background as a counseling psychology clinician. The facilitator was credentialed to conduct group therapy and research within this vulnerable population. The researcher co-facilitated the workshop.

**E. Goal and SMART Objectives**

The intervention aimed to help people living with HIV to reflect, discuss, and understand how their life stories affect their mind and body through a creative and visual process. Thus, a primary goal of this intervention was to reduce the internalized stigma experienced by PLHIV. This intervention had two outcome objectives:

- 1) To increase resilience of all participants by 10% after the 7-hour body mapping workshop.
- 2) To increase self-esteem of all participants by 10% after the 7-hour body mapping workshop.

There were also three process objectives:

- 1) To provide a safe space where all participants can express their feelings and thoughts through art during the body mapping workshop.
- 2) To have all participants stay for at least five hours of the workshop.
- 3) To recruit eight participants who are people living with HIV and aged over 18 years old.

**F. Theoretical Basis of the Intervention**

Living with X is a body mapping workshop that has been implemented for people living with HIV. It is a therapeutic and psychosocial activity that researcher adopted based on the Health Belief Model (HBM) [12].

The Health Belief Model focuses on a person’s beliefs and attitudes to explain health behaviors [31]. The Health Belief Model explains that a person is ready to act based on: (1) one’s desire to avoid sickness or to improve one’s health; and (2) the belief that there is an effective way to do so. It was originally developed in the 1950s by three social psychologists named Hochbaum, Rosenstock, and Kegels who worked in the U.S. Public Health Services [31]. The implementation of the intervention follows the HBM in its use of education, group discussion, and self-reflection to influence participants’ beliefs and attitudes towards stigma related issues. The intervention encouraged participants to increase self-esteem and resilience based on the beliefs about perceived stigma. Table I helps to break down the construct into strategies for change.

TABLE I. HEALTH BELIEF MODEL FOR “LIVING WITH X”

Concept	Definition	Change Strategies
Perceived susceptibility	Beliefs about the chances of getting a condition	<ul style="list-style-type: none"> <li>) Understand PLHIV are at risk for stigma</li> </ul>
Perceived severity	Beliefs about the seriousness of a condition and its consequences	<ul style="list-style-type: none"> <li>) Specify the consequences of internalized stigma among PLHIV</li> </ul>
Perceived benefits	Beliefs about the effectiveness of taking action to reduce risk or seriousness	<ul style="list-style-type: none"> <li>) Provided a safe space</li> <li>) Storytelling using the body map</li> </ul>
Perceived barriers	Beliefs about the material and psychological costs of taking action	<ul style="list-style-type: none"> <li>) Offer a chance for self-presentation</li> <li>) Group support and positive feedback</li> </ul>
Cues to action	Factors that activate “readiness to change”	<ul style="list-style-type: none"> <li>) Provide information about self-esteem and resilience</li> </ul>
Self-efficacy	Confidence in one’s ability to take action	<ul style="list-style-type: none"> <li>) Discuss tips for enhancing self esteem and resilience</li> <li>) Provide written positive feedback after presentation</li> </ul>

**G. Logic Model**

TABLE II. LOGIC MODEL FOR “LIVING WITH X” BODY MAPPING WORKSHOP

Inputs	Outputs		Outcomes
	Activities	Participation	
<ul style="list-style-type: none"> <li>) Facilitator</li> <li>) Venue</li> <li>) Projector</li> <li>) Laptop</li> <li>) Painting materials</li> <li>) Support from AIDS Athens</li> </ul>	<ul style="list-style-type: none"> <li>) Seven hours of body mapping workshop</li> <li>) Resilience scale</li> <li>) Self-esteem scale</li> <li>) Group discussion and education about resilience and self-esteem</li> <li>) Body mapping exercises</li> </ul>	<ul style="list-style-type: none"> <li>) Facilitators</li> <li>) PLHIV</li> </ul>	<ul style="list-style-type: none"> <li>) Increased resilience among PLHIV</li> <li>) Increased self-esteem among PLHIV</li> <li>) Safe space provided</li> <li>) Reduced internalized stigma</li> </ul>

Assumptions:

- 1) Body mapping workshop is a fun, art-based therapeutic activity.
- 2) Group discussion and education will help to increase resilience and self-esteem.
- 3) AIDS Athens provides support.

External Factors:

1) Maturity of participants who have been living with HIV for a long period of time.

*H. Management Plan and Budget*

TABLE III. TIMELINE FOR LIVING WITH X EVALUATION PROCESS

Activity	Week									
	1	2	3	4	5	6	7	8	9	10
Needs Assessment	■									
Stakeholder engagement	■	■	■	■						
Participant and facilitator recruitment				■	■	■	■	■	■	
Facilitator training							■	■	■	
Program Implementation									■	■
Data Collection										■
Data Analysis										■
Reporting										■

Table III describes the schedule for each activity that was implemented during 10 weeks period of time. Researcher was in charge of maintaining the fidelity of the timeline.

TABLE IV. BUDGET FOR LIVING WITH X EVALUATION PROCESS

Category	Items	Costs
Personnel	Lunch for 9	\$ 61.80
	Refreshment 2 times	\$ 29.51
Equipment	Art paper 2 pieces	\$ 36.4
	Painting Materials for 8	\$ 177.91
Other Expenses	Gift Card \$15 x 9	\$ 135
Total		\$ 440.62

*I. Ethical Considerations*

The researcher gained approval from IRB and completed CITI training. The researcher considered aspects of ethics in accordance with the Belmont Report, which are beneficence, respect, and justice [25]. All participants understood and signed the informed consent forms that explained procedures, benefits, risks, and protection of confidentiality of the participants. The researcher also consulted with AIDS Athens about the appropriate incentives for participants.

III. METHODS

*A. Participants*

The participants in this study were recruited through flyers where they could register to the researcher. They were seven PLHIV who were clients of AIDS Athens. The participant group consisted of five males, one female, and one transgender female. The participant's ages ranged from 23 years to 50 years (M=39.4 years).

TABLE V. DEMOGRAPHIC OF PARTICIPANTS

Characteristic	N	%
Gender		
Male	5	71.4
Female	1	14.3
Transgender	1	14.3
Age (year)		

Mean	39.4	
Range	(23 – 50)	
20 – 30	1	14.3
31 – 40	2	28.6
41 – 50	4	57.1

*B. Procedures*

1) *Evaluation Questions:* Evaluation questions focus on measuring outcomes and process by asking about the change of individuals, relatives, groups, organizations, and communities. The changes may range from knowledge, attitudes, skills, behaviors, and economic conditions [25]. Based on the purposes of this evaluation, the researcher had the following evaluation questions:

1. Process Evaluation Questions:

- a. Were the workshop's activities implemented as originally intended?
- b. Can this workshop be replicated in this setting?
- c. Can this workshop be improved upon in future deliveries?

2. Outcome Evaluation Questions:

- a. Did body mapping workshop meet its intended outcomes?
- b. Were participants satisfied with the workshop?
- c. What was the cost of implementing the program?

2) *Process Evaluation:* Process evaluation is a method designed to measure how the program was conducted. The main focus is on the program's operations, implementation, and service delivery. A process evaluation typically denoted what was learned during the course of a program [25]. Process evaluation of Living with X intervention was conducted during and after completion of the workshop.

3) *Information Needed:* To answer the key questions for process evaluation, the following types of data are needed: (1) participants' and facilitator's socio-demographic characteristics; (2) intervention activities (written program manual, pre-test, post-test and group discussion); (3) observation of program activities; (4) participant's feedback data including program strengths, weaknesses, and challenges; and (5) program costs [25].

4) *Data Collection:* Table VI describes the method and types of data that were collected to address the key evaluation questions:

TABLE VI. DATA COLLECTION METHOD FOR PROCESS EVALUATION QUESTIONS

No	Evaluation questions	Information Source	Data Collection Method
1	Were the workshop's activities implemented as originally intended?	Program manual and documentation	Observation and program documentation

2	Can this workshop be replicated in this setting?	Facilitator, participants	Interview within one week after completion of the workshop  Program documentation
3	Can this workshop be improved upon in future deliveries?	Facilitator, participants	Interview within one week after completion of the workshop.  Program documentation.

5) *Maintaining Program Fidelity*: To ensure that the program is implemented, as it should be, program fidelity needs to be measured. Methods to maintain program fidelity were as follows [32]:

- J Briefing facilitators. The researcher and facilitator met before the implementation of the program to form similar understanding about the program process, the importance of adhering to program manual, how to monitor fidelity, and how to deal with issues that might appear during its process.
- J Collecting Data on Fidelity Monitoring. During program implementation of the workshop, the researcher completed a fidelity checklist, the Program Observation Form after viewing the entire session. The researcher also kept track with the schedule on hand.
- J Providing Feedback on the Spot. It was important to give feedback to the facilitator on the spot whenever necessary if issues appeared. The researcher gave feedback during the intervention process related to time and exercises.
- J Use Data for Continuous Quality Improvement. The data collected from fidelity monitoring helped to map the strength and weakness of the program.

6) *Outcome Evaluation*: Outcome evaluation is a method to indicate impact or changes that result from a program delivery. Outcome evaluation of *Living with X: A Body Mapping Workshop in the Time of HIV and AIDS* was conducted after completion of the workshop. Table VII describes the method and types of data that were collected to address the key outcome evaluation questions:

TABLE VII. DATA COLLECTION METHOD FOR OUTCOME EVALUATION QUESTIONS

No	Evaluation Questions	The Indicators	Data Collection Method
1	Did body mapping workshop meet its intended outcomes?	J Increased resilience score by 10% J Increased self esteem score by 10%	Resilience and self-esteem scale before and after the workshop.

2	Were participants satisfied with the workshop?	J Participants indicate high satisfaction score	Satisfaction questionnaire after the completion of the workshop.
3	What was the cost of implementing the program?	J Budget provided covers all needed activity and supplies.	Program documentation

### C. Evaluation Design

The outcome evaluation design used in this study was One-Group Pretest-Posttest Design: O1 – X – O2 (O1 was pretest, X was body mapping workshop, O2 was posttest). The strength of the design was researcher did not need to find another group of PLHIV for comparison [25]. Thus, the researcher assessed change in resilience and self-esteem before and after the intervention in the same group of participants.

One methodological weakness of this design was that researcher was lack of randomization and lack of control. Therefore, there was a possibility that other variables or factors could have influenced the outcome [25]. For example, there were some threats to internal validity in the outcome evaluation included: (1) Maturation. Every human being has potential to grow and improve with the passage of time. Hence, it is possible that maturation influenced change in resilience and self-esteem. (2) Testing. A participant may potentially “learn” through multiple administrations of a test. In this study, the same test was administrated before and after the workshop.

### D. Measures

For the outcome evaluation, the researcher used the Rosenberg Self-Esteem scale [24], the Connor-Davidson Resilience Scale (CD-RISC), and the Client Satisfaction Questionnaire (CSQ) [16]. Data analysis was completed using SAS. *Paired samples t-tests* were conducted to measure pretest and posttest differences in resilience and self-esteem [19]. To measure participants’ satisfaction with the intervention, the researcher examined each question from the CSQ-8 and used the mean descriptive statistics to indicate level of satisfaction. The researcher determined the impact of the intervention according to the evaluation questions by analyzing at the mean differences. A mean score of 1 indicated low satisfaction, 2 indicated moderate, 3 indicated good, and 4 indicated high level of satisfaction.

For process evaluation, the researcher conducted one-on-one interviews with all seven participants and the facilitator. Structured interviews were conducted in a private room, recorded on audio recorder, and then transcribed verbatim. The interview consisted of open-ended questions and lasted for between 5 and 10 minutes. The transcripts were coded and grouped into categories of themes based on key evaluation questions. Analysis of data was conducted using content analysis procedures.

**IV. RESULTS**

**A. Outcome Evaluation Key Questions**

1) Did body mapping workshop meet its intended outcomes?

**TABLE VIII. PRE-TEST AND POST-TEST MEAN DIFFERENCE OF SELF-ESTEEM AND RESILIENCE**

No	Variable	Pretest	Posttest	Mean Diff	95% CI	t	df	p-value
1	Self-esteem	29.6 (SD=5.2)	31.9 (SD=6.4)	2.3	-0.67, 5.2	1.89	6	0.108
2	Resilience	66.9 (SD=19.0)	70.7 (SD=17.4)	3.9	-1.2, 9.0	1.85	6	0.114

The results on table VIII show that the post-test mean scores of PLHIV Self-esteem (31.9) and resilience (70.7) scores are greater than their pre-test mean scores of self-esteem (29.6) and resilience (66.9) respectively. Results indicate an increase between the level of self-esteem as 7% and resilience as 6% after participants received the intervention. The *Living with X: A Body Mapping Workshop in the Time of HIV and AIDS* did not meet its intended outcome (10%) despite an increase in self-esteem and resilience.

2) Were participants satisfied with the workshop?

**TABLE IX. MEAN OF EACH QUESTION OF CLIENT SATISFACTION**

Variable	N	Mean	Std Dev	Minimum	Maximum
Q1	7	3.8571429	0.3779645	3.0000000	4.0000000
Q2	7	3.8571429	0.3779645	3.0000000	4.0000000
Q3	7	3.7142857	0.4879500	3.0000000	4.0000000
Q4	7	3.4285714	1.1338934	1.0000000	4.0000000
Q5	7	3.4285714	1.1338934	1.0000000	4.0000000
Q6	7	3.5714286	0.5345225	3.0000000	4.0000000
Q7	7	3.7142857	0.4879500	3.0000000	4.0000000
Q8	7	3.1428571	1.2149858	1.0000000	4.0000000

Table IX indicates the mean value of each question regarding satisfaction with the intervention. Each question and its level of satisfaction are reported below:

a. Question 1: How would you rate the quality of service you have received?

All participants (100%) showed good/high level of satisfaction.

b. Question 2: Did you get the kind of service you wanted?

All participants (100%) agreed that they got the kind of service they wanted.

c. Question 3: To what extent has our program met your needs?

All participants (100%) stated that the intervention met almost all of their needs.

d. Question 4: If a friend were in need of similar help, would you recommend our program to him or her?

Six participants (85.6%) would recommend the intervention for a friend in need of similar help. Only one (14.3%) would not do.

e. Question 5: How satisfied are you with the amount of help you have received?

Six participants (85.6%) were satisfied with the amount of help received. One participant was dissatisfied.

f. Question 6: Have the services you received helped you to deal more effectively with your problems?

All participants (100%) stated that the intervention helped them to deal more effectively with their problems.

g. Question 7: In an overall, general senses, how satisfied are you with the service you have received?

All participants (100%) were mostly to very satisfied with the service they received.

h. Question 8: If you were to seek help again, would you come back to our program?

Five participants (71.4%) said they would come back to the program if they were to seek help again. Two participants (28.6%) would not.

Researcher concludes that all participants were highly satisfied with the *Living with X: A Body Mapping Workshop in the Time of HIV and AIDS*.

Figure 1 describes the satisfaction level of participants based on each question as explained above.

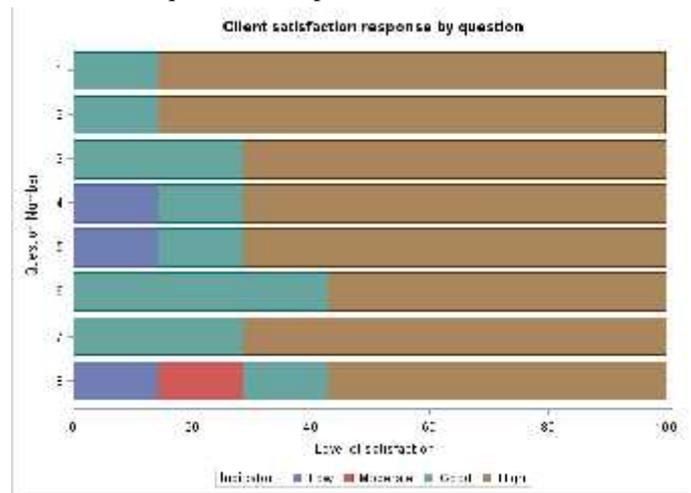


Fig. 1. Participants' level of satisfaction with body mapping by questions of CSQ-8

3) What was the cost of implementing the intervention?

As indicated in Table 4 regarding budget for the intervention, the researcher needed \$440.62 to implement the intervention. The amount sufficiently accommodated eight participants, one facilitator, one co-facilitator, and covered painting materials, food (lunch and snacks in the morning and afternoon), and \$15 gift cards for each participant and facilitator. The researcher did not need to rent a room since it was free after coordinating with Department of Health

Promotion and Behavior, College of Public Health to use one of its conference rooms in Wright Hall.

### *B. Process Evaluation Key Questions*

1) Were the workshop's activities implemented as originally intended?

Using a Program Observation Form and checking the planned schedule, the researcher examined the intervention and found the following results:

a) In general, the researcher and facilitator were very clear at explaining the activities.

b) The researcher kept track of time during intervention. The facilitator completed all session content, exercises, group discussion, and education. There was some lost time due to length of discussions, taking several breaks for participants who smoked, and a late delivery of lunch. In the end, however, the intervention finished according to the intended schedule.

c) The presentation of some materials seemed rushed due to trying to finish all exercises within the 7-hour activity time period.

d) Participants appeared to understand the material and the exercises.

e) All participants actively participated in discussion and activities.

f) Facilitator and researcher had good knowledge of the program, had a good level of enthusiasm, did not hesitate in addressing concerns, were well organized, and had excellent rapport and communication with participants.

From the condition described above, researcher concluded that the workshop's activities were implemented as originally intended.

2) Can this workshop be replicated in this setting?

The *Living with X: A Body Mapping Workshop in the Time of HIV and AIDS* surely can be replicated in the setting of Athens. Here are the results of interviews with participants and the facilitator to support the conclusion:

a) Participants reported they had no challenges that prevented them from completing the body mapping. However, several concerns were reported such as one participant thinking he was not an artist. One participant described a problem with eyesight, leading to insecurity that he could represent his story through a good-looking painting.

b) All participants felt the body mapping workshop provided a safe space for them to express their feelings and thoughts and to make new friends.

c) Participants stated the following items as the "best part of the workshop": (1) the exercise where they had to sketch each other's body on a paper because it made them feel relaxed; (2) the excellent facilitators; (3) the painting activity itself because it helped to pour out feelings and thoughts into the body map; and (4) meeting new friends because hearing others' stories enhanced self-confidence. In addition, participants described the presentations were the most inspiring part because it gave sense of advocacy and support.

d) Overall, participants indicated that they enjoyed the intervention because it was informative, educational, fun, and helpful.

3) Can this workshop be improved upon in future deliveries?

Yes. Suggestion for program improvement from participants and facilitator are reported below:

a) Provide healthier food that contains less sugar.  
b) Have the body mapping workshop held within a half day instead of seven hours.

c) Involve more people but ideally eight participants to get a greater variety of ideas and stories to learn from.

d) Have participants write down their feelings through poetry.

e) Provide incense to create positive mood or to cover unpleasant odor.

f) Modify the first exercise, which is drawing a body sketch. Instead of having two sketches, it would be nice to have a third shadow. These could represent the person before being infected by HIV, the support system, and the person currently living with HIV.

g) Implement the intervention for a group of people who already know one another because it will facilitate a stronger group process.

## V. DISCUSSION

*Living with X: A Body Mapping Workshop in the Time of HIV and AIDS* is an art-based therapeutic intervention where participants can express their feelings, thoughts, and life stories through a human-sized painting called a body map [2;11]. This study was conducted to evaluate the outcome and process of a body mapping intervention with several key research questions. Results showed that the workshop's activities were implemented as originally intended; all participants were highly satisfied; the workshop can be replicated in the setting of Athens and improved upon in future deliveries; lastly, there were increase in self-esteem and resilience for PLHIV after completing the body mapping workshop.

Results from this intervention were supported by a similar study conducted in Belgium for 10 migrants which described body mapping as a valuable tool for empowering PLHIV in coping with HIV and in HIV disclosure, as well as increasing self-esteem [22]. Additional supporting research was quasi-experimental study utilizing Cognitive Behavior Therapy Group Training that showed a reduction in internalized stigma and an increase in self-efficacy, self-esteem, quality of life, and ability to cope with stigma. Results indicated that training PLHIV to cope with stigma is achievable [10]. In comparison, an effective integrated approach for reducing HIV-related stigma is Acceptance and Compassion-Based Group Therapy. The intervention helps PLHIV to improve their compassion and also reduce shame, which resulted in healthier coping with stigma [26]. However, it requires more researches to evaluate

the effectiveness of a body mapping workshop because there were hardly journal articles published that utilized this method.

## VI. CONCLUSIONS

Living with X: A Body Mapping Workshop in the Time of HIV and AIDS was conducted for seven PLHIV aged 18 years above who were clients of AIDS Athens. The intervention was conducted in Athens, GA as a seven-hour workshop facilitated by a doctoral candidate of counseling psychologist. This study aimed to evaluate the process and outcome of a body mapping workshop. Through a mixed method of collecting data such as assessing program documentation, interviewing and surveying participants and facilitator, results of the process evaluation are as follows: (1) the intervention was implemented as originally intended; (2) the body mapping workshop surely can be replicated in the Athens setting; (3) the body mapping workshop can be improved upon for future delivery.

Findings from the outcome evaluation include: (1) the body mapping workshop did not meet its intended outcome objectives (an increase of resilience and self-esteem scores of 10% post-intervention). However, improvements were observed, including 7% for self-esteem and 6% for resilience); (2) all participants indicated good to high level of satisfaction with the workshop; and 3) the cost of implementing the intervention was \$ 440.62 which was sufficient for the purpose of this study.

The body mapping workshop is an effective and efficient intervention for PLHIV and can be replicated and improved for future delivery in various settings.

### A. Strengths

This study implemented an innovative and community-based intervention. Overall, the researcher concluded this intervention was a fun, helpful, and educative therapeutic activity for PLHIV. A review of current literature revealed there have been many projects to help PLHIV using body mapping as a tool for research, education and therapy [2;11;28;36]. However, the researcher found no literature in journal articles that reported body mapping as a tool for research or therapy for PLHIV in the USA. Participants of this pilot study indicated the body mapping workshop was fun, informative, educational, and helpful. Overall, participants stated the body mapping project met their needs of having a safe space to express their life stories through a body map. Therefore, results of the current study are congruent with previous literature stating a body mapping is an effective tool that can be adopted in different countries and settings as an empowering community or group activity [28].

### B. Limitations

This study was an open trial evaluating the outcome of a 7-hour body mapping workshop on resilience and self-esteem. There was no follow up to evaluate its long-term effect of internalized stigma reduction. The increase of self-esteem and resilience mean score was statistically insignificant, this may

be due to the utilization of self-report measures and the very small sample for quantitative analysis (type II error).

### C. Recommendations

1) *Future Research:* Body mapping is a useful and effective tool for therapy and research for PLHIV. However, considering report from the researchers and the facilitator, engaging in such a personal and intimate intervention poses challenges. Researchers need to be sensitive in creating a group of participants. It is recommended that the body mapping intervention be implemented over at least two days in order to create trust and cohesiveness among participants so that they are willing to be vulnerable and to share as an established group [28]. Future research may modify the body mapping intervention according to the local needs and cultures to create a safe space for participants [11]. It is also strongly recommended that body mapping intervention be used as a research tool for participatory research on other populations such as people living with addiction, people affected by HIV, people with chronic diseases, and people with mental health issues. Lastly, future research should utilize qualitative approaches for obtaining more findings regarding outcome variables measured.

2) *People Living with HIV:* The body mapping intervention provided participants (PLHIV) a safe space to tell their stories through body maps. The body map created by each participant had different stories and meanings. Body map can be used as an advocacy and educational tool to help to reduce stigma in the society. For example, displaying body map projects in an art exhibition. Furthermore, empowered PLHIV can use their own body map to help empower newly diagnosed individuals.

3) *International Clinical Setting:* Community based organizations; hospitals, rehabilitation centers, and other similar agencies can adopt and modify the body mapping intervention according to their own culture. For example, a different approach for doing a body mapping intervention may be required in a collective culture compared to more individualistic one. Implications for how the body mapping intervention is implemented internationally should be explored.

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## REFERENCES

- [1] AIDS Athens, "History," Retrieved from <http://aidsathens.org/about-us/history-2/>.
- [2] Art2Be, "Body mapping," Retrieved from [http://www.art2bebodymaps.org/index.php?option=com\\_content&task=view&id=7&Itemid=15](http://www.art2bebodymaps.org/index.php?option=com_content&task=view&id=7&Itemid=15).
- [3] Audet, C. M., McGowan, C. C., Wallston, K. A., & Kipp, A. M., "Relationship between HIV stigma and self-isolation among people

- living with HIV in Tennessee,” *PLoS ONE*, 2013, 8(8), e69564. doi:10.1371/journal.pone.0069564.
- [4] Bennett, D. S., Traub, K., Mace, L., Juarascio, A., & O’Hayer, C. V., “Shame among people living with HIV: a literature review,” *AIDS Care*, 28(1), 2016, 87-91. doi:10.1080/09540121.2015.1066749.
- [5] Bitonte, R. A., & De Santo, M., “Art therapy: an underutilized, yet effective tool,” *Mental Illness*, 2014, 6(1), 5354. doi:10.4081/mi.2014.5354.
- [6] Centers for Disease Control and Prevention [CDC], “HIV in the United States: at a glance,” September 2015, Retrieved from <http://www.cdc.gov/hiv/statistics/overview/ataglance.html>.
- [7] Chambers, L. A., Rueda, S., Baker, D. N., Wilson, M. G., Deutsch, R., Raeifar, E., . . . Team, T. S. R., “Stigma, HIV and health: a qualitative synthesis,” *BMC Public Health*, 15(1), 2015, 1-17. doi:10.1186/s12889-015-2197-0.
- [8] Earnshaw, V. A., Jin, H., Wickersham, J., Kamarulzaman, A., John, J., & Altice, F. L., “Exploring intentions to discriminate against patients living with HIV/AIDS among future healthcare providers in Malaysia. *Tropical medicine & international health: TM & IH*, 19(6), 2014, 672-679. doi:10.1111/tmi.12306.
- [9] Earnshaw, V. A., Smith, L. R., Chaudoir, S. R., Amico, K. R., & Copenhaver, M. M., “HIV Stigma Mechanisms and Well-Being Among PLWH: A Test of the HIV Stigma Framework,” *AIDS and Behavior*, 17(5), 2013, 1785-1795. doi:10.1007/s10461-013-0437-9.
- [10] Fuster-RuizdeApodaca, M. J., Molero, F., & Ubillos, S., “Assessment of an intervention to reduce the impact of stigma on people with HIV, enabling them to cope with it. *Evaluación de una intervención dirigida a reducir el impacto del estigma en las personas con VIH capacitándolas para afrontarlo.*, 32(1), 2016, 39-48. doi:10.6018/analesps.32.1.192121.
- [11] Gastaldo, D., Magalhães, L., Carrasco, C., & Davy, C., “Body-Map Storytelling as Research: Methodological considerations for telling the stories of undocumented workers through body mapping,” 2012, Retrieved from <http://www.migrationhealth.ca/undocumented-workers-ontario/body-mapping>.
- [12] Glanz, K., Rimer, B. K., & Institute, N. C., “*Theory at a glance: a guide for health promotion practice* (pp. 54),” 1997, Retrieved from <https://archive.org/details/theoryatglancegu00glan>.
- [13] Goffman, E., “*Stigma: notes on the management of spoiled identity*,” 1963, New York: Simon & Schuster, Inc.
- [14] Herek, G. M., Capitanio, J. P., & Widaman, K. F., “HIV-related stigma and knowledge in the United States: prevalence and trends, 1991-1999,” *Am J Public Health*, 92(3), 2002, 371-377. doi:10.2105/AJPH.92.3.371.
- [15] International Center for Research on Women (ICRW), “Stigma and discrimination,” 2015, Retrieved from <http://www.icrw.org/what-we-do/hiv-aids/stigma-discrimination>.
- [16] Larsen, D.L., Attkisson, C.C., Hargreaves, W.A., and Nguyen, T.D., “Assessment of client/patient satisfaction: development of a general scale, evaluation and program planning, 2, 1979, 197-207. Instrument reproduced with permission of C. Clifford Attkisson.
- [17] Lau, J. T. F., Choi, K. C., Tsui, H. Y., & Su, X., “Associations between stigmatization toward HIV-related vulnerable groups and similar attitudes toward people living with HIV/AIDS: Branches of the same tree? *AIDS Care*, 19(10), 2007, 1230-1240. doi:10.1080/09540120701402848.
- [18] Lee, R. S., Kochman, A., & Sikkema, K. J., “Internalized stigma among people living with HIV-AIDS. *AIDS and Behavior*, 6(4), 2002, 309-319. doi:10.1023/A:1021144511957.
- [19] McDonald, J. H., “Handbook of biological statistics (3rd ed.), 2014, Retrieved from <http://www.biostathandbook.com/pairedttest.html>.
- [20] Mahajan, A. P., Sayles, J. N., Patel, V. A., Remien, R. H., Ortiz, D., Szekeres, G., & Coates, T. J., “Stigma in the HIV/AIDS epidemic: a review of the literature and recommendations for the way forward,” *AIDS (London, England)*, 22(Suppl 2), 2008, S67-S79. doi:10.1097/01.aids.0000327438.13291.62
- [21] Mburu, G., Ram, M., Skovdal, M., Bitira, D., Hodgson, I., Mwai, G. W., . . . Seeley, J., “Resisting and challenging stigma in Uganda: the role of support groups of people living with HIV.” *J Int AIDS Soc*, 16(3 Suppl 2), 2013, 18636. doi:10.7448/IAS.16.3.18636.
- [22] Nöstlinger, C., Loos, J., & Verhoest, X., “AIDS research and human retroviruses,” 31(1), 2015, 47-48. doi:doi:10.1089/aid.2014.0316.
- [23] Rahmati-Najarkolaei, F., Niknami, S., Aminshokravi, F., Bazargan, M., Ahmadi, F., Hadjizadeh, E., & Tavafian, S. S., “Experiences of stigma in healthcare settings among adults living with HIV in the Islamic Republic of Iran,” *Journal of the International AIDS Society*, 13, 2010, 27-27. doi:10.1186/1758-2652-13-27.
- [24] Rosenberg, M., “Society and the adolescent self-image,” Princeton, NJ: Princeton University Press, 1965.
- [25] Royse, D., Thyer, D. K., & Padgett, D. K., “*Program evaluation: an introduction (5th Edition)*. Belmont, CA: Wadsworth, Cengage Learning, 2010.
- [26] Skinta, M. D., Lezama, M., Wells, G., & Dilley, J. W., “Acceptance and compassion-based group therapy to reduce HIV stigma. *Cognitive and Behavioral Practice*, 22(4), 2015, 481-490. doi:http://dx.doi.org/10.1016/j.cbpra.2014.05.006
- [27] Sohler, N., Li, X., & Cunningham, C., “Perceived discrimination among severely disadvantaged people with HIV infection. *Public Health Reports*, 122(3), 2007, 347-355.
- [28] Solomon, J., “Living with X”: A body mapping journey in time of HIV and AIDS,” Facilitator’s Guide, 2007.
- [29] Treves-Kagan, S., Steward, W. T., Ntswane, L., Haller, R., Gilvydis, J. M., Gulati, H., . . . Lippman, S. A., “Why increasing availability of ART is not enough: a rapid, community-based study on how HIV-related stigma impacts engagement to care in rural South Africa. *BMC Public Health*, 16, 2015, 87. doi:10.1186/s12889-016-2753-2.
- [30] Tsai, A. C., Bangsberg, D. R., & Weiser, S. D., “Harnessing poverty alleviation to reduce the stigma of HIV in sub-saharan Africa. *PLoS Med*, 10(11), 2013, e1001557. doi:10.1371/journal.pmed.1001557.
- [31] University of Twente, “Health Belief Model,” January 2012, Retrieved from [https://www.utwente.nl/cw/theorieenoverzicht/Theory%20Clusters/Health%20Communication/Health\\_Belief\\_Model/](https://www.utwente.nl/cw/theorieenoverzicht/Theory%20Clusters/Health%20Communication/Health_Belief_Model/).
- [32] U.S. Department of Health & Human Services [HHS], “Maintaining and monitoring fidelity for teen pregnancy prevention programs,” 2015, Retrieved from [http://webcache.googleusercontent.com/search?q=cache:Aswii-VVk7YJ:www.hhs.gov/ash/oah/oah-initiatives/teen\\_pregnancy/training/Assests/maintaining\\_fidelity\\_for\\_tpp\\_program](http://webcache.googleusercontent.com/search?q=cache:Aswii-VVk7YJ:www.hhs.gov/ash/oah/oah-initiatives/teen_pregnancy/training/Assests/maintaining_fidelity_for_tpp_program).
- [33] UNAIDS, “AIDS by the numbers 2015,” Retrieved from [http://www.unaids.org/sites/default/files/media\\_asset/AIDS\\_by\\_the\\_numbers\\_2015\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/AIDS_by_the_numbers_2015_en.pdf).
- [34] Waluyo, A., Culbert, G. J., Levy, J., & Norr, K., “Understanding HIV-related stigma among Indonesian nurses. *The Journal of the Association of Nurses in AIDS Care : JANAC*, 26(1), 2015, 69-80. doi:10.1016/j.jana.2014.03.001.
- [35] Ware, N. C., Wyatt, M. A., & Tugenberg, T., “Social relationships, stigma and adherence to antiretroviral therapy for HIV/AIDS. *AIDS Care*, 18(8), 2006, 904-910. doi:10.1080/09540120500330554.
- [36] Wienand, A., “An evaluation of body mapping as a potential HIV/AIDS educational tool,” 2006.
- [37] World Health Organization [WHO], “Global health observatory (GHO) data - HIV/AIDS,” 2016, Retrieved from <http://www.who.int/gho/hiv/en/>.