FINAL REPORT: CDC U49 CE 000520
THE SHARE PROJECT, EFFECTIVENESS OF A HOUSING INTERVENTION FOR BATTERED WOMEN

I. Executive Summary/Abstract

Background: Intimate partner violence (IPV) is a significant public health and human rights issue, and annual results in an estimated 1,200 deaths and 2 million injuries among women in the United States (Centers for Disease Control and Prevention, 2008). The health sequelae of IPV include injuries and less obvious or chronic health problems (Bassuk, Dawson, & Huntington, 2006; Coker, Weston, Creson, Justice, & Blakeney, 2005; Eby, 2004; Glass, Perrin, Campbell, & Soeken, 2007; Gorde, Helfrich, & Finlayson, 2004; Stewart, et al., 1989; Weaver & Clum, 1995). A lack of income to sustain safe housing has been consistently reported as an important barrier to women leaving an abusive relationship (Anderson & Sauders, 2003; Hardesty & Campbell, 2004; Sheridan, 2001). The perceived and actual availability of safe, affordable and housing for survivors of IPV is also linked to women's decision and ability to safely leave an abusive relationship (Hirst, 2003).

Objective: The purpose of the SHARE project, Effectiveness of a Housing Intervention for Battered Women was to evaluate the effectiveness, including cost effectiveness, of rental assistance for permanent housing with domestic violence (DV) advocacy, on the health and well-being of abused women and their children compared to programs that provided only housing or only DV advocacy.

Design and Methods: SHARE, a quasi-experimental longitudinal study, was conducted in partnership with four community-based DV and housing programs serving Multnomah County, Oregon. Participants recruited from the partner agencies were English or Spanish-speaking adult women age 18-64 who self-reported all of the following: 1) physical and/or sexual violence by an intimate or ex-intimate partner in the previous six months; 2) newly enrolled in services through one of our partner agencies; 3) housing stabilization as a primary need; and 4) planned to stay in the surrounding metro area for the duration of the study. Eligible women were interviewed every 6 months over 18 months for a total of four face-to-face interviews by a skilled research assistant. The study participants were asked to report on themselves and a randomly selected target child age 4-16 years. Questions focused on

demographics, victimization, level of danger, mental health and health, housing instability, absence from work and/or school, quality of life, utilization and cost of services.

Results: A total of 260 female survivors completed the 18-month interview, 94% of the original sample of 278. We did not find differences between intervention and comparison groups on the majority of health and well-being outcomes as hypothesized. However, we developed a housing instability index which goes beyond the standard distinction between homeless or housed and established that it had strong psychometric properties. Using this scale, we found important effects of housing instability on health and well-being for both women and their children in terms of health and victimization over time for the entire sample. Our analysis indicates that the greater the number of risk factors for housing instability, the higher the level of PTSD, depression, absence from work and/or school and hospital and emergency department use, and a reduced quality of life.

There was a general improvement in outcomes for the entire sample in the first 6 months, which extended through the 18 month period in level of danger, PTSD, depression, general health, quality of life and housing stability. For children, change in housing instability was a significant predictor of change in the total score for the Child Strength and Difficulty Questionnaire, with changes driven by changes emotional symptoms, peer problems, and conduct problems. The level of danger predicted total health care utilization and utilization days. Women who reported forced sex had on average 24 more services and 11 more days of utilization and those who report their abuser is violently and constantly jealous had lower behavioral health utilization. Increased housing instability was associated with increased health care utilization. Cost of services analysis indicated a reduction in service costs over the 18 months reduced, but we need further analysis.

Conclusions: Housing instability is an important and understudied social determinant of health for survivors of IPV, and makes unique contributions to negative health outcomes, over and above the impact of danger in the relationship. The findings from this study begin to address the gap in much needed new information on the relationship between housing instability, IPV and the effect on survivor's health, employment and utilization of medical care or other services.

II. Purpose

A. Description of intervention and theoretical rationale for intervention approach

An array of programs and interventions to improve the safety and health of battered women and children have been developed since the 1970's, including community based victim advocacy services and housing options including emergency shelter, transitional and permanent housing (Baker, et.al, 2010, attached). However, there has been limited rigorous, published evaluations of the effectiveness of such programs and interventions. Research on the Housing First model for homeless populations have reported effectiveness in maintaining stable housing and other benefits for participants that stem from permanent housing (employment, education and maintenance of the family unit). To our knowledge, these evaluations have not specifically included data about individuals or families experiencing IPV; some studies excluded families or DV survivors. One evaluated Housing First program required that participants be separated from the abusive partner for at least 4 months before receiving housing, which meant that "Housing First" for battered women was limited. Further, to our knowledge, there has not been an evaluation of cost-effectiveness of housing, including the Housing First model, or of community DV services. The SHARE study was designed to fill these gaps in research and to evaluate a housing first model of rent assistance towards permanent housing intervention for IPV survivors.

One of the first evaluations of an advocacy model to increase women's safety and improve quality of life was done by Sullivan & Bybee to evaluate a community-based advocacy intervention for women exiting a DV shelter program. Their 10-week community advocacy intervention was strengths–based and designed to flexibly meet the needs of each individual involved and to be administered by para-professionals. Women (n=278) were randomized to the intervention or control group and followed for two years (Sullivan & Bybee, 1999). Individual level outcome data were collected at 6, 12, 18, and 24 months post-intervention. The investigators found that the community advocacy intervention significantly decreased physical violence and depression and increased quality of life, social support and access to resources. The positive intervention effects persisted across the two-year follow-up.

Based on the findings from the advocacy intervention, Bybee and Sullivan developed a conceptual model to explain the process of change over time for battered women (Bybee & Sullivan, 2002). The

advocacy intervention enhanced the quality of battered women's life by improving their access to community resources and increasing the social support available to them. The investigators then used the work of Diener and Funjita to conceptualize quality of life as a mediator rather than an outcome in their process of change model (Diener &Fujita, 1995). Specifically, resources and social support influences the woman's immediate quality of life, but quality of life can influence a woman's later resources and social support. In the process of change model, enhanced quality of life facilitates later acquisition of resources and social support. The ongoing acquisition of resources and support acts as a protective factor against further victimization by an intimate or ex-intimate partner (Bybee & Sullivan, 2002).

The SHARE study expands on this work and provides information about the effectiveness of housing combined with advocacy and support services on the health and safety for IPV survivors and their children, and costs to the community. The housing program model used the empowerment conceptual model and community advocacy program developed by Sullivan and colleagues and the Housing First model as the foundation of the SHARE study. We examined similar individual level outcomes as Sullivan and colleagues did, for a sample of women IPV survivors and children and tested the impact of the rental assistance (resource) and social support (mobile individualized advocacy) on health, quality of life and IPV victimization over time. The SHARE study also extends previous research by examining the impact of a housing intervention on the community, including the use and cost of a broad range of emergency and crisis services (e.g. shelter, police, medical, and child welfare).

The SHARE study housing intervention provided by Volunteers of America, Oregon (VOA) Home Free Program is one part of a comprehensive set of services available to DV survivors and is grounded in the belief that everyone deserves a safe, stable, and self-determined life, and that services to battered women needed to be accessible and non-intrusive. A focus on cultural competency and outreach to underserved populations and those survivors who face multiple system barriers and/or have complex needs resistant to short-term resolution (survivors with disabilities, large families or more severe mental health problems or other barriers) are key to the Home Free Model. Development of this model came from years of experience in providing DV services to women and children in Multnomah County, an understanding of community advocacy interventions, and concerns about gaps and barriers in the

provision of usual DV services. Using a "Housing First" model that emphasizes rapid return to potentially permanent, neighborhood-based housing, intensive advocacy begins with overcoming the family's barriers to housing. Once such a safe home is established, the survivor and her advocate address other facets of the family's needs to help them sustain their housing and maintain self-sufficiency.

B. Broad description of research study and theoretical basis/rationale for selected design

The purpose of SHARE study was to evaluate the effectiveness, including cost-effectiveness, of an existing innovative housing intervention on the health, safety and resources of survivors of IPV, their children and community. The Home Free Program supports permanent housing for underserved battered women and children through rent assistance for up to two years and flexible, individualized mobile advocacy services. The SHARE study compared the VOA Home Free rent assistance (RA) intervention to usual DV services defined as: 1) women who received Post Crisis Advocacy (PCA) services from VOA (i.e., long-term advocacy without long-term rent assistance, generally due to lack of funds); 2) women who accessed services at a local DV emergency shelter (Raphael House of Oregon, RH), where they receive temporary (up to 60 days) emergency housing and temporary post-crisis advocacy; 3) women who accessed funds from the Temporary Assistance to DV Survivors (TA-DVS), a one-time Oregon State grant that can be used for any expense incurred while trying to escape an abusive relationship (e.g., rent, moving expenses, changing locks) with no accompanying advocacy; or 4) women who accessed assistance from a non-DV housing program (Impact Northwest, IN), where they received rent assistance towards permanent housing but no DV advocacy services. A detailed description of the VOA Home Free Program and the SHARE study was published in the Journal of Women's Health, 2009.

The SHARE project used a quasi-experimental longitudinal design over an 18-month period, with pre-intervention and post-intervention outcome measures collected from multiple sources, including self-report and administrative record reviews to test the following hypotheses:

1. Evaluate the effectiveness of the Home Free RA Program compared to usual DV services on survivor outcomes. Hypothesis: At 6, 12 and 18 months post-intervention, the intervention group will have better quality of life (defined as one's social relationships, financial independence, psychological

well-being, self-determination and autonomy, and physical and material well-being), mental health, and social support and decreased frequency and severity of IPV than the comparison groups.

2. Evaluate the effectiveness of the Home Free RA Program compared to usual DV services on children of survivors' outcomes. Hypothesis: At 6, 12 and 18 months post- intervention, the intervention group will have better mental health, behavior, parental support and school achievement and decreased exposure to violence than the comparison groups.
3. Evaluate the effectiveness of the Home Free RA Program compared to usual DV services on community outcomes. Hypothesis: At 6, 12 and 18 months post-intervention, the intervention group will have lower levels of utilization of crisis intervention services, such as police, emergency rooms, shelters and involvement in DHS Child Welfare and higher levels of stable housing, employment and access to community resources than the comparison groups.
4. Evaluate the cost and cost effectiveness of the Home Free RA Program compared to usual DV services. Hypothesis: The Home Free RA Program will be shown to be a cost-effective means of reducing IPV and crisis service utilization, and increasing quality of life for RA participants compared to usual DV services.

As noted above, the findings from our study did not indicate differences between intervention and comparison groups on the majority of health and well-being outcomes for women and children as hypothesized. However, when we examined outcomes (health, housing instability, victimization) overtime for the entire sample, we found important effects of housing instability on health and well-being for both women and their children. We will detail study findings below and address study limitations that we believe impacted our ability to find significance between intervention and comparison groups.

C. Specific goals and objectives of intervention

As stated above, the SHARE study was designed from an empowerment/strengths framework. Battered women, when provided with rent assistance towards permanent housing and supportive people (i.e. skilled advocates) will have increased access to opportunities, support and information that can protect themselves and their children from further victimization, increase their quality of life, reduce short

and long-term negative health outcomes and utilization of costly health care (e.g. emergency department) and other community services (e.g. police, child welfare, emergency and homeless shelters).

Home Free's mission is to assist adults and children surviving DV to move not just toward safety, but toward *freedom* and all that the word *home* suggests. Their programs provide long-term, post-crisis support designed to prevent victims from having to return to an abusive home. Their objectives are to increase survivor safety, long-term housing stability, and access to other needed resources/services.

III. Target Population:

A. Description of intervention population and control group

The target population for this study was English and Spanish-speaking adult women (18 years and older), who were physically or sexually assaulted by an intimate or ex-intimate partner in the six months prior to baseline, and who had sought and obtained services from the study partner DV victim services or housing agencies in Multnomah County and planned to stay in area for the length of the study. The SHARE study used the Centers for Disease Control and Prevention (CDC) IPV surveillance and uniform definitions:. Specifically, IPV is a pattern of abusive and coercive behaviors including physical violence, sexual violence, threat of physical or sexual violence, psychological/ emotional abuse, and stalking by a spouse, ex-spouse, current or former intimate partner (Saltzman, Fanslow, McMahon, & Shelley, 1999).

Study Sample: The participants for this study (n=278) were English or Spanish-speaking women living in dangerous and often unstable situations due to IPV. Eighty study participants were recruited from the VOA RA, 100 from the VOA PCA, 40 each from RH shelter and TA-DVS and 18 from IN, the non-DV specific housing program. Table 1 provides the descriptive statistics for the sample by group. Slightly over half of the entire sample reported their race as White (53.7%) followed by African American (26.6%) and other race (20.9%). Twenty five percent of participants identified as Hispanic/Latina and the majority of those women chose to complete the interviews in Spanish. Twenty-six percent of participants were married. Only 5.4% of participants were living with an intimate partner at the time of interview; most of these women (4.4%) were currently living with an abusive partner. About one quarter of the sample had less than a high school diploma, another 25% had a GED or high school diploma. Twenty-nine percent of participants were employed at the time of the interview. Two-thirds of

the study sample (67.6%) made $1,000 or less per month and nearly 30% of these participants reported making less than $500 per month. The majority had some type of health insurance (79.5%), primarily Medicaid through the Oregon Health Plan. Only 26.6% reported one or more of the following types of homelessness in the 6-months prior to the survey: lived in a motel/hotel they paid for themselves, or stayed at a homeless shelter, lived on the street, in their car, or camped out. Over half (55%) reported having lived with family or friends in the prior 6 months ("doubled-up").

Table 1: Demographic information in from the baseline survey by study group.

	Percent at Baseline				
	VOA RA (N=80)	**VOA PCA (N=100)**	**RH (N=40)**	**DHS only (N=40)**	**Impact Northwest (N=18)**
Race*					
White	47.5%	61.0%	47.5%	62.5%	38.9%
African American	20.0%	32.0%	22.5%	30.0%	27.8%
American Indian/Alaska Native	5.0%	10.0%	5.0%	10.0%	5.6%
Asian	2.5%	.0%	.0%	2.5%	.0%
Native Hawaiian/Other Pacific Islander	1.3%	1.0%	.0%	2.5%	.0%
Other race	32.5%	12.0%	27.5%	7.5%	33.3%
Hispanic/Latina	31.3%	17.2%	30.0%	15.0%	44.4%
Currently Married	27.5%	30.0%	17.5%	22.5%	27.8%
Living with partner	5.0%	7.0%	2.5%	5.0%	5.6%
Living with abusive partner	4.5%	4.1%	6.3%	2.8%	.0%
Less than high school diploma	23.8%	25.0%	33.3%	22.5%	33.3%
GED/High school diploma	26.3%	23.0%	23.1%	20.0%	16.7%
Some college	31.3%	32.0%	20.5%	22.5%	16.7%
Vocational graduate/ Associates Degree	12.5%	16.0%	12.8%	27.5%	22.2%
Bachelor's degree or higher	6.3%	4.0%	7.7%	7.5%	11.1%
Currently Employed	42.5%	30.0%	12.5%	20.0%	22.2%
Income					
0-$99/month	10.0%	12.0%	17.5%	.0%	.0%
$100-$500/month	13.8%	22.0%	20.0%	17.5%	27.8%
$501-$1,000/month	33.7%	34.0%	45.0%	52.5%	44.4%
$1,001-$1,500/month	28.7%	19.0%	12.5%	22.5%	16.7%
$1,501-$2,000/month	10.0%	10.0%	2.5%	5.0%	11.1%

$2,001-$4,000/month	3.8%	3.0%	2.5%	2.5%	.0%
Has Health Insurance	80.0%	77.0%	77.5%	85.0%	83.3%
Own apartment or rental where you pay rent	61.3%	62.0%	67.5%	60.0%	66.7%
Own apartment or rental where you pay at least some of the rent	56.3%	22.0%	15.0%	17.5%	72.2%
House where you pay mortgage	3.8%	7.0%	5.0%	.0%	5.6%
Motel/hotel you pay	6.3%	22.0%	22.5%	20.0%	11.1%
Transitional housing program	2.5%	3.0%	2.5%	5.0%	5.6%
Section 8 housing	10.0%	11.0%	7.5%	20.0%	5.6%
Motel/hotel on a vouchering program	6.3%	39.0%	20.0%	10.0%	22.2%
Homeless shelter	1.3%	1.0%	7.5%	2.5%	11.1%
DV shelter	17.5%	14.0%	100.0%	15.0%	38.9%
Street/car/camping	10.0%	11.0%	17.5%	15.0%	33.3%
Detention center, jail, or prison	2.5%	2.0%	2.5%	2.5%	.0%
With friends or family members	53.8%	56.0%	55.0%	57.5%	50.0%

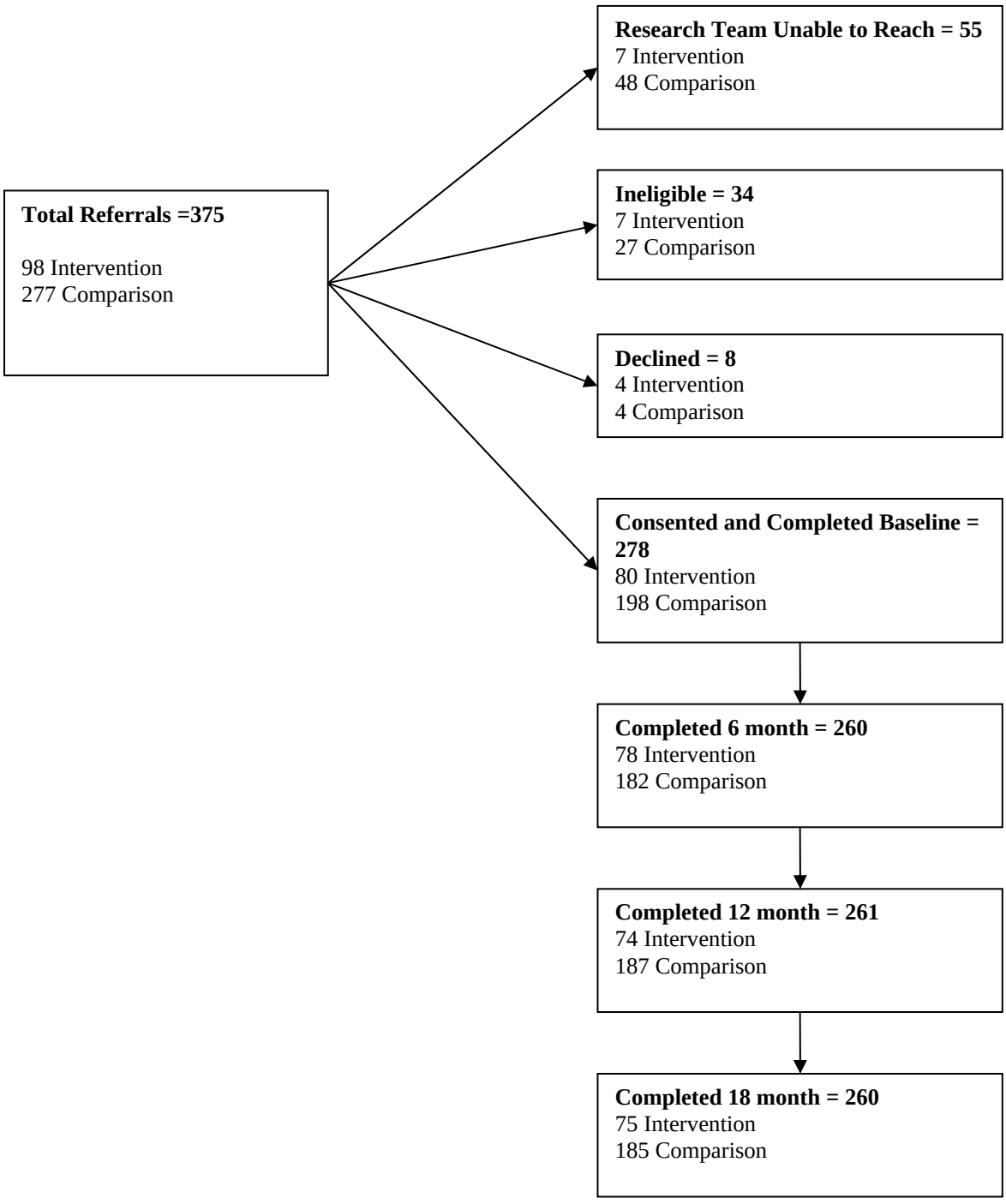
* Women could report multiple races so the total percent exceeds 100

î This variable was asked to only a subset of participants who had children.

B. Flow chart showing potential participants/recruitment outcomes

Retaining victims of intimate partner violence (IPV) in longitudinal research is challenging, as abused women often face safety concerns, housing and employment instability, poverty, and major life transitions, making it difficult to locate and retain participants at follow-up time points. The study team focused significant resources and skills to develop and implement individualized, technology-based retention strategies, which minimize participant loss while maintaining participant safety. These techniques resulted in retention rates of 94% at 6-, 12-, and 18-month follow-up interviews in the sample, as presented in Figure 1. The team presents in their recently published manuscript (Clough et al, 2010) details of the ethical use of appropriate technology for maximizing retention of participants as well as the importance of adjusting retention activities to meet the individual safety needs of each participant.

Figure 1: Flow Chart of participants from referral to baseline and follow-up interviews



IV. Primary Programmatic Activities

A. Program Components

1. Development

The SHARE study sought to evaluate an existing housing program model. Availability of and access to affordable housing in Multnomah County and the surrounding Portland-Metropolitan area has been limited for many years, at least since the early 1990's. The lack of housing options for low income survivors meant that over time survivors were staying for longer periods of time in shelters before moving into more stable, longer-term housing. For example, the average length of stay in a DV emergency shelter in 1991 was 11 days; in 2007, it had risen to 56 days (Baker, et.al, 2010).

In 1998, Multnomah County received a Housing and Urban Development (HUD) grant to provide rent assistance in scatter-site/community housing for DV survivors. VOA was one of the four victim advocacy programs awarded contracts under that grant. VOA RA is based on this model of advocacy plus rent assistance together with an emphasis on services to survivors who could not access DV emergency shelters. In 2003, VOA closed its DV emergency shelter with a capacity of four families at a time, and opened the newly designed Home Free program, which incorporated the housing first concept into a broad range of crisis and longer-term, community-based services. They made these changes for several reasons: 1) although VOA's emergency shelter addressed the needs of survivors and their children in the crisis stage of escaping abuse, the typical stay was often not enough time to secure safe, stable housing and women frequently left the shelter only to go to another shelter or to temporary arrangements elsewhere; 2) some women, such as those with mental health issues, disabilities, substance abuse problems, or cultural or language barriers, were not able to or likely to access emergency shelter, and needed access to other services that would provide housing and assistance; 3) because emergency shelters are expensive to operate, VOA was only able to offer limited follow-up services to women who had left the shelter. These changes more than tripled the number of survivors they were able to serve each year, allowed them to reach a wider population of survivors who had difficulty succeeding or accessing emergency shelters, and survivors they assisted were able to more rapidly survivors into apartments or houses in neighborhoods they preferred and in which they could stay.

Program Design: The Volunteers of America Home Free Rent Assistance program offers women escaping abusive relationships financial assistance with all or a portion of the rent in permanent housing of their choice, coupled with long-term, client-centered DV advocacy. The program is particularly focused on those survivors who face multiple system barriers and have complex needs resistant to short-term resolution. Using a "Housing First" framework that emphasizes rapid return to permanent, neighborhood-based housing, intensive advocacy begins with overcoming the family's barriers to housing. Once a permanent, safe home is established, the survivor and her advocate address other facets of the family's needs in order to help them sustain their housing and maintain self-sufficiency. Child and youth advocates accompany adult advocates on home visits to provide advocacy support for children and ensure they are receiving the services they need. VOA advocacy services include mobile, active assistance with a variety of systems, including criminal and civil legal systems, law enforcement, child welfare, immigration, health care, public school, and others with which the survivor must interact to address her needs and those of her children. Advocates accompany survivors to appointments and hearings, assist with navigating these systems, and speak on women's and children's behalf when necessary to secure needed services or relief. Their commitment to reaching survivors means mobile, active advocacy that reduces the barriers to DV support services. Their commitment to inclusion means that all of their services are free, flexible and individualized, and driven by survivors' needs and goals.

VOA provides a range of services, including emergency, transitional, children and outreach services. Emergency services include crisis hotline, safety planning and advocacy, assistance with relocation and confidential address programs, emergency housing through placement in motels, ongoing one-on-one emotional support, referrals to and help with community and government resources. Transitional Services include permanent housing support, personal, financial and educational goal planning, active help with moving through and understanding complex service systems, long-term one-on-one advocacy support, home visits, accompaniment to court and other appointments. Children's Services include *Safe Spaces,* a group for children exposed to DV, teen services and girls empowerment groups, one-on-one, age-appropriate mobile advocacy, parenting and DV support groups, referral to educational, recreational, and other community programs, intervention with families involved with child welfare. Outreach Services

offer support in an umber of community settings including child welfare and public assistance offices, the courthouse, Portland Police Bureau's DV unit and the county jail. Outreach Services include confidential support groups in English and Spanish, safety planning and advocacy, assistance with relocation and confidential address programs, access to emergency and transitional housing resources, ongoing one-on-one emotional support, referrals to and help with community and government resources.

2. Implementation

The VOA RA program was a well-established model and implementation fidelity was ensured through the following standards and practices: basic training for advocates met the Oregon State guidelines; housing-related and on-going training was provided by VOA and Multnomah County; supervision was provided by managers who had helped develop and implement the model and thus were well-versed in the RA program model; and regular (monthly or more frequent) meetings with VOA managers and the research team discussed any proposed or likely changes in staffing or level of service delivery.

Training and implementation fidelity for the research team was achieved in the following ways: Skilled research assistants/interviewers (RA/I) with experience in research and working with DV survivors were hired to conduct interviews. Each RA/I received the same basic training as the advocates and received training on crisis intervention, suicide intervention, and vicarious trauma. They completed Institutional Review Board (IRB) required training on HIPAA, responsible conduct of research, and protection of human subjects, and were provided training by the principal investigators and study coordinator on protocols, interviewing techniques, retention strategies, and safety in the field. RA/I's were required to conduct mock interviews with other staff and with a survivor before recruitment began to receive feedback on process and procedures. The study coordinator and interview team met bi-weekly to discuss progress on study referrals, follow-up interview schedules, adherence to study protocols and to debrief about the difficulties of conducting in depth interviews with IPV survivors.

The team periodically assessed how well the study was operating to determine and address factors that may impede successful completion of the study. We evaluated the extent to which the assessment of multiple outcomes provided new information on effective interventions to prevent violence. We evaluated

our recruitment success and modified the study recruitment and retention protocol as needed to achieve the sample size for the study. In order to ensure adherence to the research protocol, we used several monitoring strategies. First, all research staff were thoroughly trained on protocols prior to implementation. Monthly research team meetings were held with PIs to support RA/Is and discuss challenges of the protocol and resolve problems. The study coordinator, with the PIs, also worked individually with RA/Is who were having challenges reaching participants for follow-up interviews or difficulties with some aspects of the interview, such as asking sensitive issues related to sexual violence.

The study team developed a tracking database to organize referrals, securely store participant contact information, and generate reports for follow up contact and interview schedules. The database was used to document all pertinent information about interviews, safety considerations for each participant, and notes that would assist RA/I's in staying in touch with and locate participants to retain them in the study.

B. Challenges and resolutions

The SHARE study experienced several challenges during the course of the study. However, with collaboration and positive relationships in the community and with study partners, we were able to successfully resolve the majority of challenges in an efficient manner. The SHARE study was developed through collaboration with community-based programs delivering services to survivors that had their own target populations, missions and procedures. Therefore, it was imperative that the study design was developed to minimize the effects of the research on already existing programs and their services.

Survivors of IPV access multiple community-based programs and services to meet their safety needs. Thus, study participants recruited from one program often accessed services from another comparison group or the intervention group. For example, the participants recruited from VOA RA often applied for and received the TA-DVS grant to assist with housing needs. In addition, one of the comparison groups (RH) introduced additional rental assistance capacity and long-term follow-up during the study period to meet the identified needs of survivors. Both of these situations, made it more difficult to determine the effect of the VOA Home Free RA intervention as originally designed. However, it is not appropriate when examining the effectiveness of an existing community intervention to randomize women to services or deny them services that they would otherwise have access to if they were not enrolled in the study.

Therefore, in the design of the study analysis, our team recognized that participants would cross-over from comparison group to intervention group and vice-versa within the 18 months of follow-up services.

The research team in planning the study was very sensitive to the need to protect human subjects. Therefore, the team was required to seek approval from several institutions, CDC, Oregon Health & Science University, Johns Hopkins University and Kaiser Center for Health Research. In addition, VOA Home Free and the other community partners were consulted on and asked to approve decisions related to survivor safety and confidentiality. We also obtained a certificate of confidentiality from the CDC. Although all of these approvals were critical to improving the study design through ensuring efforts to protect participants during their participation in research, these approvals take time to obtain and therefore, often resulted in a delay in study implementation.

In study planning, two local DV shelters had initially agreed to participate in the study, but later decided to withdraw because of concerns that their participation could result in findings that would demonstrate the lack of need for emergency shelters for survivors.The team worked closely with these community agencies to describe the study purpose and demonstrate that the study objective was not focused on limiting resources for emergency shelters but rather expand the continuum of housing options for survivors. Although, the two agencies decided not to participate, we maintained positive relationships with these agencies and were able to engage another emergency shelter to participate in the study.

Initially, community DV advocates reported concerns that the survivor interviews were too long, potentially intrusive and could retraumatize survivors, and reported a general distrust of researchers. To address these concerns, the team demonstrated the qualifications of the RA/Is to safely and respectfully conduct the interviews and the study procedures to reduce risk of further trauma, provided opportunities for partner agency staff to give feedback on the study interviews and procedures, and invited staff to attend planning meetings to learn more about the study and engage with the researchers to increase trust and relationships between researchers and community agencies. Most importantly, advocates heard from study participants that they found the interviews helpful and meaningful to them.

Another major challenge was the difficulty in obtaining cost and service level data from public entities. Large institutions that had agreed to provide data often required on-going and consistent

interaction to obtain the data. Difficulties included changes in staff involved in producing reports, the need to access multiple databases at a single agency, getting agency-specific releases of information rather than being able to use the study informed consent document, and the large workload of staff at these agencies. For one year, we hired a full-time research assistant who was responsible for collecting all needed cost and service data. Persistence was the key to finally obtaining the data we sought.

V. Research Design and Implementation

A. Description of design and Implementation

In this quasi-experimental study, the effectiveness, including cost effectiveness of the housing intervention program (VOA RA) on IPV survivors, their children and community was compared with usual DV and housing services. Following provision of the intervention, outcomes for the survivor, children, community and cost were measured in both intervention and comparison groups by a combination of survivor self-report, review of medical, police, child welfare, housing and community partner records. Intervention and comparison group outcomes data were collected at four time points. Components of the research included: 1) Longitudinal quantitative interviews with 278 participants recruited from five sites at four time points (baseline, 6, 12 and 18 months post-housing intervention; 2) Qualitative interviews with a sub-sample of 11 participants at three months post baseline interview to examine in-depth what is defined as housing stability and quality housing for survivors; 3) A cost study including the DV service providing agencies, criminal justice agencies, health care services, social services, legal services and employment; and 4) A process evaluation describing participants' and partner agencies' experiences participating in the SHARE study.

English and Spanish speaking adult women who had been physically or sexually assaulted by an intimate or ex-intimate partner in the last six months, had sought and obtained services from our partner DV or housing services agencies, and planned to stay in the area were eligible for the study. Women were eligible for the study "post crisis" to provide an opportunity for women and children to have their basic needs of shelter and safety met, to begin the movement from crisis to planning for the future; and provide study partner staff time to build a relationship with women. "Post-crisis" was defined differently for each agency as each provides a different type of service and level of intervention: for RH shelter, 7-14 days of

shelter was considered "post crisis"; for the VOA PCA group, 3 substantive meaningful contacts with an advocate was considered "post crisis"; for TA-DVS, VOA RA, and IN if participants were determined eligible by staff and enrolled in program services, they were considered "post-crisis."

Recruitment. Following the "post-crisis" period, trained RA/I's worked closely with program staff to recruit potential study participants. Potential study participants were informed that refusal to participate would have no effect on their receipt of any DV program services in Multnomah County. An 800 toll-free study number was also provided on all study material for women to contact investigators to indicate an interest in receiving more information or participating in the study.

Procedures. After obtaining informed consent, the RA/I's administered the survey to study participants: 80 in the intervention and 198 in the comparison group. This survey was completed face-to-face at a time and place deemed safe and convenient by the participant. The baseline survey interview focused on the women's experience in the 6 months preceding study enrollment and included: 1) demographic information, including relationship status, housing, employment, health insurance; 2) IPV frequency/severity; 3) quality of life; 4) mental health, 5) social support; and 6) utilization of community resources (i.e. health care, law enforcement, civil court, child welfare and public assistance). Women were asked at the baseline interview to provide up to six safe contact numbers/addresses that the research team could use to contact them during 18 months of the study to complete the follow-up interviews.

Post- intervention interviews were conducted at 6, 12 and 18 months after baseline. The post-intervention interview was conducted face-to-face or by telephone as determined by the participant and consisted of the same survey questions but focused on outcomes since the previous interview. For example, women were asked if a partner or ex-partner threatened or used violence since the previous interview. Several strategies and methods were utilized to ensure high retention rates of study participants (Clough et al., 2010), including:

1. Focus on building and maintaining a relationship with each participant;
2. Asking participants for several (at least six) names, phone numbers, e-mails of individuals (i.e. family members, friends, neighbors, employers, community organizations) who would know of their whereabouts and could be used as alternate safe contacts;

3. After each face-to-face contact with a participant, the RA/I provided a business card containing the study phone number;
4. Participants were given key chain with the study phone number printed on it to assist women with contacting RA/Is;
5. Monetary compensation was given for time and expertise to each participant: $20 for the baseline survey, $40 for the 6- month survey, $60 for the 12-month survey and $80 for the 18-month survey;
6. RA/Is contacted all women in-between (1, 2, 4, 8, 10, 14, and 16 months) the scheduled post-intervention interviews to briefly assess for safety and stability, confirm contact information and any anticipated changes to contact information;
7. A toll-free 800 number is provided to all participants at each face-to-face or telephone contact. Women could use the 800 number to ask questions about the study, their participation, or alert study investigators to a telephone number change or number for safe contacts.

Interview Measures

Tables 2 and 3 detail the adult and child measures, respectively, in the baseline, 6, 12, and 18 month interviews. See "Adult-Child Measures Attachment for a more complete description of measures.

Table 2: Adult Measures

Variable	Instrument Description
Demographic information	Standard demographic information, such as age, race, ethnicity, education, employment living situation, plus information about health insurance and health care received
IPV (types and severity)	Severity Violence Against Women Scale (SVAWS) Danger Assessment (DA) Women's Experience with Battering (WEB)
Quality of Life	Quality of Life Questionnaire
General Health	SF-8
Drug and Alcohol Abuse	CAGE
PTSD Depression	PTSD Checklist – Civilian version (PCL-C) The Center for Epidemiologic Studies Depression Scale (CES-D)
Social Support Community Resources	Adult Social Support Scale Utilization of Community Resources
Housing Stability	Housing Instablity Index developed for SHARE study (see discussion below)

Table 3: Children's Measures

Variable	Measure
Children's IPV Exposure	Exposure to Violence Interview (EVI)
Child Health and Behaviors	Pediatric Symptom Checklist Strengths and Difficulties Questionnaire
Parental Attachment	Parent-Child Attachment Scale

In additional to the validated measures used for the SHARE interview, participants with children were asked about their parental support and about their child's school achievement.

Housing Instability Index

The Federal definition of homeless is an individual who lacks a fixed, regular, and adequate nighttime residents or an individual who has a primary nighttime resident that is a supervised publicly or privately operated shelter designed to provide temporary living accommodations, an institution that provides temporary residence for individuals intended to be institutionalized or a public or private place not designed for, or ordinarily used as a regular sleeping accommodation for human being (U. S. Department of Housing and Urban Development, n.d.). Women, especially women with children, are less likely to meet the Federal definition of homeless because they are hesitant to live on the streets or in shelters because of safety concerns for themselves and their children, the fear of Child Welfare involvement if their children are homeless, and the well-documented lack of DV shelters for women (National Network to End DV, 2010). Thus, abused women are more likely to "double-up" or to live in highly unstable situations. To more accurately reflect the housing status of the survivors, we developed an index of housing instability, based published literature on homelessness and housing instability (Martin & Stern, 2005; Melbin, Sullivan, & Cain, 2003; Menard, 2001; Pavao, et al., 2007).

Housing instability has been typically measured as a binary scale (stable/unstable housing), and has been defined in different ways, such as multiple unwanted moves, not paying other bills, eating less or skipping meals in order to pay rent, doubling up with family or friends, being threatened with eviction, or experiencing rental or credit problems (Baker, Cook, Noris 2003), being homeless for a period of time, having been evicted or more than 30 days late paying for housing, paying more than 50% of income on housing costs, or having difficulty finding safe, adequate, and affordable housing (Reid et al.

2008; Kushel et al. 2006; Ma et al. 2008) . However, each of these indicators reflect varying degrees of housing instability and make a binary measure inadequate to capture the complexity of housing instability. One possible reason for the sparse research addressing housing instability, as opposed to homelessness, may be a lack of validated measures of housing instability.

The SHARE project created a measure that captures the multiple components of housing instability, the Housing Instability Index (HII), and tested its psychometric properties. The items on the HII were selected to sample the complete domain of housing instability as suggested in the literature, and is a count of 10 possible risk factors for housing instability, listed in Table 4.

Table 4: Housing Instability Index (HII)

	Item Difficulty		Item Discrimination	
Item	Baseline	6-months	Baseline	12-months
Have you had to live somewhere that you did not want to live	.80	.57	.43	.73
Have you had difficulty (or were unable to) pay for your housing	.79	.60	.46	.73
Have you had trouble getting housing	.66	.43	.59	.48
Have you had to borrow money or ask friends/family or others for money to pay your rent/mortgage payment	.51	.35	.57	.54
Do you expect that you will be able to stay in your current housing for the next 6 months*	.57	.30	.43	.45
Have you had trouble with a landlord	.36	.30	.72	.54
How many times have you moved (coded as $\geq$3 versus <3)	.42	.15	.47	.30
Has your landlord threatened to evict you	.28	.18	.65	.41
Have you been served an eviction notice	.18	.13	.45	.30
How likely is it that you will be able to pay for your housing (e.g. rent/mortgage) this month (coded as unlikely/very unlikely versus likely/very likely)*	.16	.11	.20	.21

*Questions refer to current/future, rather than past 6 months.

All items ask about the previous six months, except two indicated with an asterick in Table 4. Eight items elicit a dichotomous, yes-or-no response. Two items were recoded to be dichotomous: 1) “In the past six months, how many times have you moved?” was counted as a risk factor if participants reported moving more than twice in the past 6-months; and 2) “How likely is it that you will be able to pay for your housing (e.g. rent/mortgage) this month?” was recoded so that 0 represented a response of “very likely” or “somewhat likely” and 1 represented a response of “unlikely” or “very unlikely.” Finally, one

item, “Do you expect that you will be able to stay in your current housing for the next 6 months?”, was reverse-coded so that a response of “no” was counted as a risk factor.

Our approach to testing the psychometric properties of the HII was influenced by Item Response Theory (IRT). We did not do a formal IRT analyses as our sample size was not sufficient. Item difficulty and item discrimination was computed for each of the items in the HII using data collected at baseline and 6-months, and the stability of the item difficulty and item discrimination indices were compared across the two time points. Test-retest reliability was computed as the correlation between the total score on the HII at baseline and 6-months. Correlations were used to test our hypothesize that higher scores on the HII would be associated with poorer mental health, lack of health insurance, increased hospital and emergency room use, higher food instability, higher levels of danger, more encounters with the criminal justice system, and lower quality of life. We also examined contrasted groups validity comparing those living in motels, shelters, able to pay a portion of the rent, and able to pay most or all of the rent on their degree of housing instability as measured by the HII using analysis of variance with Bonferroni post-hoc tests.

Table 4 summarizes the item difficulty and item discrimination indices for the data collected at baseline and 6-months. Item difficult reflects the proportion of people who endorsed the item. Low values of item difficult mean that few people endorsed the item. People who do endorse the item are likely to have a high degree of the attribute being measured, in this case housing instability. Item discrimination is the difference between the proportion of people scoring in the upper range of the HII who endorsed the item and the proportion of people scoring in the lower range of the HII who endorsed the item. Higher values of item discrimination reflect better ability of the item to unambiguously differentiate people along the spectrum of housing instability. The item-difficulty, item-discrimination and corresponding item-characteristic curves revealed that each item differentiates a different part of the scale and the items form a hierarchy with “living somewhere you do not want to live” being on the bottom of the hierarchy (lowest risk for housing instability) and “unlikely to be able to pay for housing this month” being at the top of the hierarchy (highest risk for housing instability). Cronbach’s alpha for

the 10-item HII measure was .70 and test-retest reliability was .30. Lower test-retest reliability was expected as the interventions were being delivered during this timeframe.

Table 5 summarizes the correlations of the HII and health care utilization, health outcomes, judicial system contacts, drug and alcohol abuse, food stability, quality of life and level of danger. As expected higher housing instability was associated with not having private health insurance, greater health care utilization, higher PTSD and depression, being unemployed, poorer quality of life, and experiencing high danger from DV. It was not associated with screening positive for drug or alcohol abuse.

Table 5: Correlations with HII

	HII
Having Private Health Insurance	-.17**
Hospital/Emergency Medical Use	.22**
PTSD	.27***
CES-D	.24***
Arrest/cited/police contact	.17**
CAGE – Alcohol	.08
CAGE – Drug	.10
Employed	-.23***
Quality of Life	-.16**
DA	.14*

*p<.05, **p<.01, ***p<.001

Importantly, the HII differentiates between those living in very unstable living situation (motels and shelters), less stable living situations (house/apartment where they pay some of the rent), and more stable living situations (house/apartment where they pay all of the rent). Table 6 provides the mean scores and standard deviations on the HII for each type of living situation (possible range 0-10). This pattern of means supports the validity of the HII. In post hoc tests following an ANOVA, all groups were significantly different from each other ($p<.001$). Those living in their own home and paying all the rent or mortgage scored significantly lower on the HII than those sharing the cost of the of the rent, those living in a DV shelter, and those living in a motel. Similarly, those paying part of the rent scored significantly lower on the HII that those living in a DV shelter and those living in a motel and women living in a motel scored significantly higher on the HII Index than those living in a DV shelter.

Table 6: Scores on Housing Instability Index by Current Living Situation

	N	Mean	SD
House/apartment pay all rent	63	3.74	1.89
House/apartment pay some rent	89	4.06	2.02
DV Shelter	41	5.71	2.44
Motel	31	6.13	1.89

Qualitative In-depth Interview

The SHARE study included an in-depth qualitative interview protocol that provided an opportunity to further explore and examine the context of survivors' experience with intimate partner violence and housing stability (Njie-Carr, Draughon, Rollins, Clough, Barnes, & Glass, International Journal of Housing Policy, In Review). The factors examined in the interview included those that had impacted housing stability/instability, the positive and negative factors in securing and maintaining housing and the interaction between housing stability, IPV and child-well-being. The interviews began with a brief review of data from the prior interview with the participants, allowing them to add, change, or clarify information related to their housing situation before asking them to expand on the themes listed above.

English and Spanish-speaking participants (n=11) from the 5 study groups were invited to complete the qualitative interview. Those invited had previously consented to participate in the study (including the qualitative component), had completed the baseline interview and had met the qualitative interview selection criteria. Two qualitative interviews were originally to be administered at 3 months post baseline and 15 months post baseline. The research team later determined after two 15 month interviews that the data was saturated and unique themes were no longer coming up in the interviews and we discontinued the 15 month interview for the remaining 9 participants. Participants were selected to ensure a group of women with different experiences and situations, based on the following characteristics: racial/ethnic diversity; housing stability (high/low); parenting status/children in the home or not; lethality of intimate partner violence experienced (Danger Assessment scores, high/not high), and Mental health (varying of depression and/or PTSD).

The interviews focused on housing stability/instability in the last 12 months, and were conducted at a convenient and safe time and place as determined by the participant. Interviews last approximainately one

hour and the participant was compensated for her time ($20 per interview) and for childcare as needed. In addition to recording the essence of the responses on paper, staff digitally recorded the interviews with the participant's verbal permission (collected on the recording) in order to ensure an accurate documentation of her responses. Participants were assured that recording the interview would in no way harm their confidentiality and that the recordings would be destroyed after the study.

Cost study

Individual level study participant data was collected from multiple agencies to determine cost of services for the cost study component of the research study. Cost study data collection protocol varied from agency to agency. VOA and IN allowed trained research assistants to review records and abstract relevant study data into a standardized database. Portland Police Bureau required security clearance to be obtained before allowing the research assistant to review and abstract data. Oregon Department of Human Services (DHS) Child Welfare, and Health Divisions, Housing Authority of Portland, and RH data were compiled by the agency staff and sent to the research team rather than collected by a research assistant. DHS Child welfare required that study participants to sign an agency specific release of information form in order to release data. Additionally, unit cost data was requested and sent to the research team from multiple sources (crisis line, homeless shelter, court, child support enforcement, etc.).

Process Evaluation

In order to better understand the experience of participating in the SHARE Project, interviews were conducted with a percentage of SHARE participants and staff from our partner agencies. Participant interviews focused on the general research experience, feelings about the interview questions, feelings about they had been were treated, safety issues, and other questions about the overall experience. Participants were chosen randomly from each group and the number of participants selected from each agency was reflective of the total sample size from that agency. In order to assure that data captured experiences participants had with every SHARE staff member that conducted interviews, selection allowed for each interviewer to be represented in the participant responses. In order to protect against response bias, the participant was interviewed by a SHARE staff who had not conducted the original

baseline interview with that participant. Participants received $20 in compensation for their interviews. Interviews were recorded and transcribed. The interviews contained 16 open-ended questions and three scale questions. Open-ended questions were coded into different themes of responses.

Interviews were conducted primarily by phone or in person if requested at a safe and convenient time for the participant. Potential participants we recruited by phone and letters from contact information gathered during their SHARE participation. One person contacted was not interested in participating, and four people could not be reached after numerous attempts. Five people we randomly chosen to substitute for these slots for a total of 24 participants.

The process evaluation also captured the experiences of the referral agencies. Questions were asked focusing on what the benefits and challenges of participating in a research project were for agencies that provided client referrals. Interviews asked for feedback regarding the staff member's own experiences in interacting with SHARE research staff, as well as their experiences in interacting with the referral process. Furthermore, we asked agencies to reflect on how they thought SHARE project participation impacted the clients at their agency. SHARE Project team members identified staff members from each partner agency that had an active role in the recruitment/research process. Staff members were invited to anonymously participate in the process evaluation by an email invitation. The number of participants selected from each agency was reflective of the total sample size of study participants from that agency, based on the total percentage of participating referrals. Interviews were conducted mostly by phone.

B. Challenges and resolutions during Implementation

Two challenges arose in recruitment. Increasing cost of rent locally made it difficult for VOA RA Program to refer the projected number of survivors and extended the projected time needed to recruit the full 80 study participants. We were able to finalize recruitment by the end of Year 3. Secondly, we were only able to recruit 18 of 40 planned participants from IN, the non-DV rent assistance program. Despite several meetings with IN staff, regular phone and email contact, and an extension of our recruitment deadline, their agency had few new referrals and we were unable to increase recruitment. Project staff explored the possibility of recruiting from other local programs similar to IN, but all of the potential

programs either provided DV services or did not anticipate many new client intakes within the next several months. Dr. Perrin, our statistical consultant, indicated that we could still conduct planned analyses with our sample of 18 IN participants. In consultation with the CDC, we decided to end recruitment so that we would have time to follow all participants through the 18-month time point.

IRB submissions to multiple review boards caused delays. For example, a request for permission to interview participants who were incarcerated following initial recruitment was approved quickly by the JHU and CDC IRBs, but not approved by the OHSU IRB even after multiple protocol revisions. We only lost one follow up time point for one participant, but substantial time was invested in seeking approval.

Although cost study data was successfully collected, it required more resources than anticipated. Original estimates of the time involved in collecting cost data did not include collecting agency-specific release of information forms, reviewing multiple sets of paper records from agencies without computerized or centralized record keeping, or having to request multiple data sets due to errors in the data received. In addition, collecting data from the large public agencies was a difficult and time-consuming process. Many public agencies have data collections systems designed to report aggregate data about specific services rather than to identify individuals across service delivery areas. These agencies were also constrained by limited budget and staffing, higher priorities such as responding to the Legislative requests, and other issues causing delays in providing cost data on the timelines projected.

Lastly, during the course of the study, the US experienced a significant economic recession that had a dramatic impact on access to affordable housing. In the study area, access to funding for DV services, including housing was limited by reduction in governmental and private funds. This resulted in less funding available to VOA RA to provide rent assistance to permanent housing. Further, rental costs increased, which further limited the number of survivors that could be served through the program. The VOA Home Free program, with support of preliminary findings from the SHARE study, was able to increase funding from local and regional foundations to serve survivors as proposed.

VI. Process and Outcome Evaluation Results

A. Results of process evaluation

The random sample of study participants from each group (n=24) selected to participate in a process evaluation interview indicated overwhelmingly that participating in the research study was a positive experience: 91.6% indicated they felt positive, 4.2% said they felt somewhat positive, and 4.2% indicated they felt somewhat negative. Participants were asked how comfortable they felt answering the interview questions, 100% indicated they felt comfortable or somewhat comfortable with none of the women indicating they felt uncomfortable. Participants reported that the best part of being in the study was: support of the interviewer, the cash incentive, helping other women, and seeing how far they had come in each interview over the 18 months. The most frequently cited worst part of participating was that it was hard to talk about some things that had happened to them. Table 7 below shows results and exemplars from additional participant process evaluation questions.

Table 7: Process Evaluation

Process Evaluation Question	**Results (n=24)**		**Exemplars**
	Yes	**No**	
Do you think that your participation in SHARE increased your risk for violence from a partner or ex-partner?	**0%**	**100%**	
Did participating in SHARE **decrease** your risk of violence from a partner or ex-partner	**42%**	**0%**	1. "Yes, with this it helped me to know myself more and to detect next time quicker when it is getting violent." 2. "I wanna say yes because I am so much more clear about what to look for and avoid before he was able to manipulate me more so before the information I gathered from the interviews"
Would you participate in a research project like SHARE in the future?	**100%**	**0%**	
Were you treated with respect by people associated with the SHARE project (interviewers, for example)?	**100%**	**0%**	1. "She was patient. She always asked if I needed a minute, she checked in with me. She knew I was opening up Pandora's box and she was really sensitive. She was really in tune. She listened. It showed me I am worthy of respect. She was the first person I talked to after him. I never had to feel alone. I knew if I called her she would be there for me. She was supportive. I cannot rave enough about how wonderful she was."

Did you think that there would be negative consequences to the services provide by the agency if you said no to the SHARE project	**0%**	**100%**	
Has the SHARE project had a positive impact on your life (or children's lives)?	**92%**	**8%**	1. "Yes, definitely. It gave me a bit of a voice and the people involved were very caring and nurturing. They cared about their jobs and what they were doing, you could really tell. " 2. "Yes, it has had a positive impact. Being able to go through this has been therapeutic. I articulated where I have been and where I wanted to be. Having someone to check in with. 3. "I really wouldn't say that. Help with financial, but as far as the study, I can't say that."
Has the SHARE project had a negative impact on your life (or children's lives)?	**0%**	**100%**	

The process evaluation also captured the experiences of the referral agencies that were part of this community based collaborative research study. The agency staff reported mostly positive experiences working with the SHARE project. When asked if the study impacted their work environment, several staff at one agency did feel like the pressure to provide referrals to the study impacted their agency and the recruitment phase of the study was a stressful for staff. Further results are shown below in Table 8.

Table 8.: Process Evaluation Staff Interviews

Process Evaluation Question	**Results (n=16)**		**Exemplars**
	Yes	**No**	
Could you easily communicate with SHARE staff?	**100%**	**0%**	
Does the SHARE project staff communicate with you and co-workers at (agency) in an appropriate way?	**100%**	**0%**	
Have you had a positive experience working with SHARE staff?	**100%**	**0%**	"It's been good, I have no complaints. I felt confident with the people doing the interviews, they had experience and were respectful and empathetic. I felt good referring women."

Overall, has working with the SHARE project been a positive experience?	**100%**	**0%**	1."I think it is great. I think it is a really important study and it is great to be involved in a really big study. My understanding is that there really isn't a study out there like it. So it is really cool to be involved and I feel kind of proud to be involved with it. I think it is really, just great that the attention is being paid to survivors" 2."I think it is a really fantastic project and I am really excited to hear about all the information that you guys have collected and see the long-term stuff you have collected and I think I am really excited that it is happening"

B. Evidence of efficacy/effectiveness of approach

Baseline Analysis

The analyses of baseline data examined the relationship of housing instability with victimization, PTSD, depression, substance use, quality of life, absence from work or school in general and due to IPV, and utilization of hospital/emergency medical care in general and use related to IPV. Multiple linear regressions were conducted to estimate the unique contribution of housing instability in predicting PTSD, depression, and quality of life controlling for age, alcohol abuse, illegal drug use, and the level of danger in the abusive relationship. Similarly, logistic regression was used to estimate the unique contribution of housing instability in predicting absence from work/school, use of either hospital/emergency medical care in general and IPV- related use of hospital/emergency medical care. When examining the health care utilization variables, we also controlled for general health and health insurance.

Demographics of the sample were reported in Table 1, and below in Table 9 more characteristics of the sample are reported. On average, women reported being in fair to good health (M=2.64, range 1-5, with score of 5 is excellent health). Their mean score on the Danger Assessment was 21.57, indicating extreme danger in the abusive relationship. Participants experienced symptoms consistent with PTSD (M=55.65, score of 30 or greater indicates symptoms of PTSD) and depression (M=31.87, score of 16 or greater indicates symptoms of depression). The CAGE classified less than 16% of the participants as alcohol or illegal drug abusers. In the previous 6 months, 54% of participants had accessed hospital or emergency medical services, with half reporting that the need for hospital or emergency medical services was due to IPV. Over 65% had been absent at least one day of work or school because of IPV. Out of a

possible 10 risk factors for housing instability (see Table 10), on average, women reported 4.83 risk factors, with a higher number of risk factors indicating greater risk for instability.

Table 9. Characteristics of the sample

Positive for Alcohol Abuse on CAGE	15.88%
Positive for Illegal Drug Abuse on CAGE	13.45%
Used Hospital/Emergency Medical Service in last 6 months	53.79%
Had IPV-related Hospital/Emergency Medical Use in last 6 months	27.80%
Absent One or More Days from Work or School in last 6 months	71.50%
Absent One or More Days Off from Work or School due to IPV	65.45%
	Mean (SD)
Number of Housing Instability Risk Factors	4.83 (2.24)
General Health	2.64(1.07)
Danger Assessment	21.57(7.27)
PLC: PTSD	55.65(14.85)
CES-D: Depression	31.87(13.52)
Quality of Life	4.10(1.20)

Table 10. Percentage of Participants Reporting Risk Factors for Housing Instability

	Yes
1. In the past 6 months, have you had to live somewhere that you did not want to live	79.86%
2. In the past 6 months, have you had difficulty (or were unable to) pay for your housing	79.35%
3. Have you had trouble getting housing in the last 6 months	65.93%
4. Do you expect that you will be able to stay in your current housing for the next 6 months (reversed)	56.98%
5. In the past 6 months, have you had to borrow money or ask friends/family or others for money to pay your rent/mortgage payment	51.09%
6. In the past six months, how many times have you moved (more than twice)	42.09%
7. Have you had trouble with a landlord in the last 6 months	36.46%
8. In the past 6 months has your landlord threatened to evict you	28.10%
9. In the past 6 months have you been served an eviction notice	18.18%
10. How likely is it that you will be able to pay for your housing (e.g. rent/mortgage) this month (unlikely-very unlikely)	16.04%

The relationship between housing instability and PTSD, depression, and quality of life controlling for the covariates (age, alcohol and drug use, level of danger in relationship) is presented in Table 11. Greater housing instability was related to more severe PTSD, worse depression, and poorer quality of life. The level of danger as measured by the DA was also significantly associated with symptoms consistent with PTSD and higher levels of depression.

Table 11. Multiple Regressions Examining the Relationship between Housing Instability and PTSD, Depression, and Quality of Life Controlling for Covariates

	PLC: PTSD		CES-D: Depression		Quality of Life	
	R^2 = .23, p < .001		R^2 = .12, p < .001		R^2 = .08, p < .001	
	â	P	â	P	Â	P
Age	.18	.001	.12	.040	-.14	.018
Alcohol Abuse	.19	<.001	.14	.016	-.15	.013
Illegal Drug Abuse	.06	.237	.02	.703	-.10	.086
Level of Danger	.29	<.001	.15	.009	-.05	.367
Housing Instability	.22	<.001	.22	<.001	-.15	.015

Note. Alcohol abuse and illegal drug abuse were coded 0 (*no*) or 1 (*yes*). The Danger Assessment scores ranged from 0-38 with higher scored indicating greater lethality. Housing instability was a count of the number of risk factors ranging from 0-10. The PLC ranged from 0-85 with higher scores indicating greater PTSD. The CES-D ranged from 0-60 with higher scores indicating greater depression. Quality of life ranged from 1 (*terrible*) – 7 (*extremely pleased*).

Housing instability and absence from work/school and hospital/emergency medical care utilization was examined controlling for covariates (see Table 12). With each additional risk factor for housing instability, the odds of being absent from work or school for any reason or due to IPV increased by 28% and 32%, respectively. Likewise, with each additional housing instability risk factor, the odds of use of hospital/emergency medical care for any reason increased 22%. Housing instability was not a significant predictor of the use of hospital/emergency medical care related to IPV. For each additional risk factor on the DA (proxy for severity of IPV), the odds of being absent from work or school for any reason or due to IPV increased by 6%. Similarly, the odds of hospital/emergency medical use and IPV-related hospital/ emergency medical use increased by 6% and 5%, respectively, for each additional risk factor identified by participants on the DA. An increase in DA score from the “increased” danger (score of 11) to “severe” danger (score of 14) was associated with a 24% increase in missed days from school/work and hospital/emergency medical use.

Table 12. Logistic Regressions Examining the Relationship between Housing Instability and Medical Use and Days off Controlling for Covariates

	Days Off From Work/School		IPV-related Days Off from Work/School		Hospital/ Emergency Medical Use		IPV-related Hospital/Emergency Medical Use	
	OR	P	OR	p	OR	P	OR	p
General Health					.64	.001	.73	.028
Insurance					1.88	.063	1.00	.492

Age	1.01	.693	1.01	.656	1.00	.852	1.04	.021
Alcohol Abuse	1.23	.696	1.31	.583	.81	.564	1.49	.289
Illegal Drug Abuse	1.41	.556	.82	.695	2.01	.107	1.36	.453
Level of Danger	1.06	.011	1.06	.020	1.06	.002	1.05	.014
Housing Instability	1.28	.004	1.32	.001	1.22	.001	1.11	.097

Note. Insurance, alcohol abuse, illegal drug abuse, hospital/emergency medical use, IPV-related hospital/emergency medical use, one or more days off from work or school, and one or more IPV-related days off from work or school were coded 0 (*no*) or 1 (*yes*). General health was coded 1 (*poor*), 2 (*fair*) 3 (*good*), 4 (*very good*), 5 (*excellent*). The Danger Assessment ranged from 0-38 with higher scored indicating greater lethality. Housing instability was a count of the number of risk factors ranging from 0-10.

Effect of Housing Assistance over Time

Longitudinal analyses were conducted to examine if the changes in outcomes over the 18 month period differed for those recruited from VOA-RA (N=78), VOA-PCA (N=91), RH (N=34), and TA-DVS only (N=38). Those recruited through IN (N=18) were not included in the analyses. Table 13 provides the means for the main outcome variables at each time point.

Table 13. Change in Outcomes Over 18 Months at Each Time Point (Mean)

	Baseline	6-month	12-month	18-month
DA	21.57	8.70	7.65	6.42
SVAWS	53.18	10.65	8.51	6.11
WEB	51.16	36.77	32.59	27.16
PTSD	55.65	48.09	45.62	42.65
CESD	31.87	24.78	24.52	21.61
General Health (GH)	2.64	2.79	2.79	2.85
QoL	4.10	4.61	4.69	4.86
HII	4.65	3.07	2.75	2.41

Interim analyses testing differences between the groups were conducted at 6 and 12 months. Table 14 shows the change from baseline at 12 months for housing instability, the DA, WEB, total score of SVAWS, PTSD, depression, and general health. Differences in the change over time between the groups were tested with repeated measures analysis of variance. The time by group interaction was not significant for any of the variables at p=.05 level. All of the groups improved significantly over time on all of the outcome variables.

Table 14. Change from baseline at 12 month interview

	HII	DA	WEB	SVAWS	PTSD	CES-D	GH

VOA -RA	-1.31	-14.27	-20.46	-44.18	-10.48	-8.04	.04
VOA -PCA	-2.42	-14.24	-19.93	-45.59	-13.68	-11.61	.30
RH	-2.49	-14.26	-18.84	-46.88	-8.11	-1.24	.14
TA-DVS only	-1.58	-13.00	-13.11	-41.20	-5.32	-4.38	-.05
IN	-1.44	-14.18	-14.60	-45.85	-10.63	-8.21	.44

Next, we explored the level of housing services received by each of the groups as reported at baseline and 6-months, and its relationship to expected outcomes. Table 15 presents the percent of people in each group reporting receipt of different housing services on either the baseline or 6-month survey.

Table 15. Level of Housing Services Received by Study Participants in Each Group

	Rent Asst	Section 8	Transit. Housing	Low Income	No Housing
VOA RA	86.3%	12.5%	1.3%	1.3%	8.8%
VOA PCA	17.0%	14.0%	8.0%	3.0%	63.0%
RH	32.5%	17.5%	27.5%	7.5%	30.0%
TA-DVS	22.5%	27.5%	2.5%	2.5%	50.0%
IN	72.2%	5.6%	5.6%	5.6%	22.2%

The majority of people in VOA-RA received rent assistance as expected, however nearly one third of the women in RH also received rent assistance. When looking across all types of housing assistance, 37% of VOA-PCA, 70% of RH, and 50% of TA-DVS only received some type of housing assistance. Based on these results, participants were reclassified into 3 groups: Long term housing assistance (N=50), short term assistance (N=122), and no housing assistance (N=106). Long term housing assistance included Section 8 and Low Income housing. Short term assistance included rent assistance and transitional housing. Repeated measures analysis of variance was used to test if the time by new group interaction was significant at 18 months. Significant interactions were found for quality of life (p=.040) and SVAWS (p=.010). The interaction was not significant for depression (p=.382), PTSD (p=.111), Danger Assessment (p=.343), general health (p=.655), WEB (p=.304), and housing instability (p=.244). Figures 2 and 3 show the change over time in quality of life and SVAWS. Neither of these interactions are considered significant if a Bonforroni correction for the number of tests is used. In general, all three

groups improved, the differences in rate of change for SVAWS are very small and those in the short-term assistance group had a decline in quality of life after six months. We also used hierarchical linear modeling to test for changes over time between the groups and the pattern of results was the same.

Figure 2: Quality of life

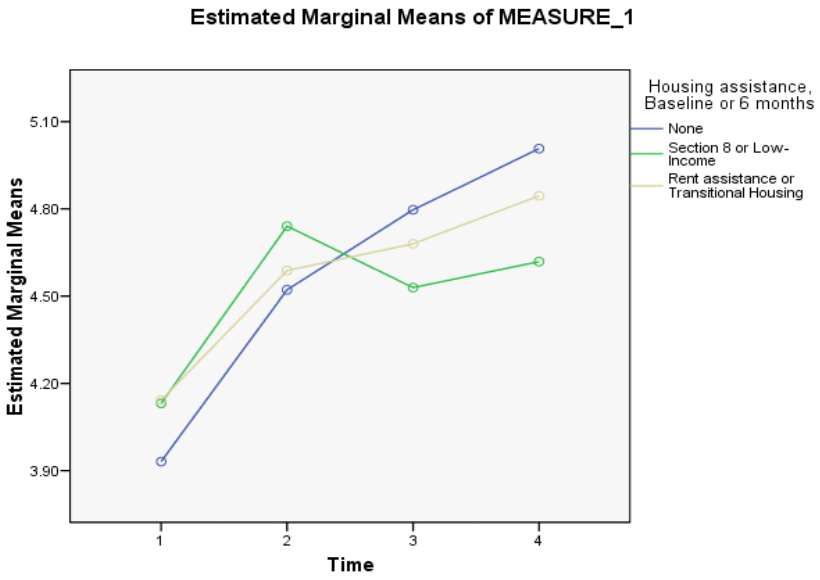
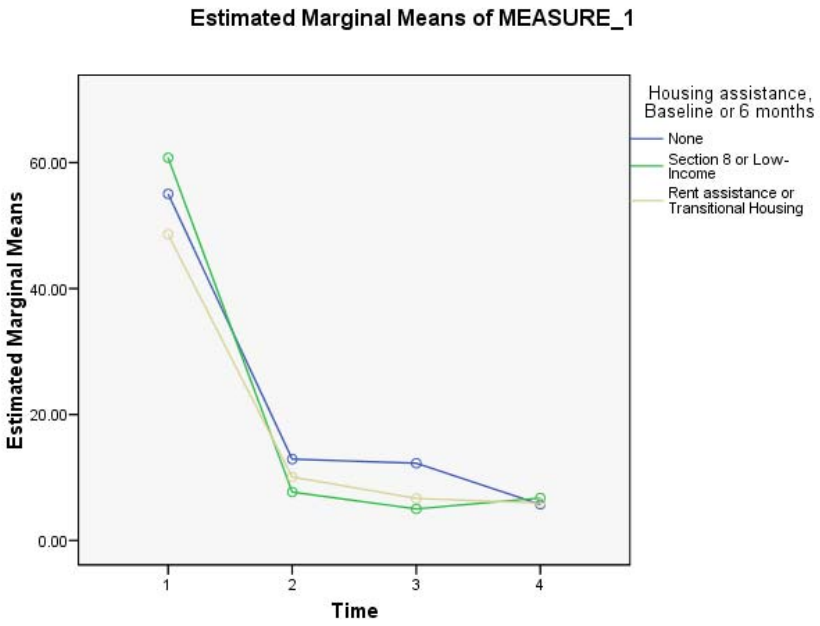


Figure 3: SVAWS



Child Outcomes at 18 months

Analyses of the child outcomes included children 5 years or older at baseline (N=169) as many of the child outcome measures were not valid for children under 5. There were 121 children with outcome data at 18-months. Of these 37 were in the no housing assistance group, 35 in the long term housing assistance group, and 49 in the short-term assistance group. At baseline the mean age of the children included in the analysis was 9.96 (sd=3.43) and 52.8% were female. Tables 16 and 17 present baseline and 18-month scores on the Parent-Child Attachment, PSC and DSQ Scales (Table 16) and school outcomes (Table 17).

Table 16. Child Outcomes at Baseline and 18 months (mean)

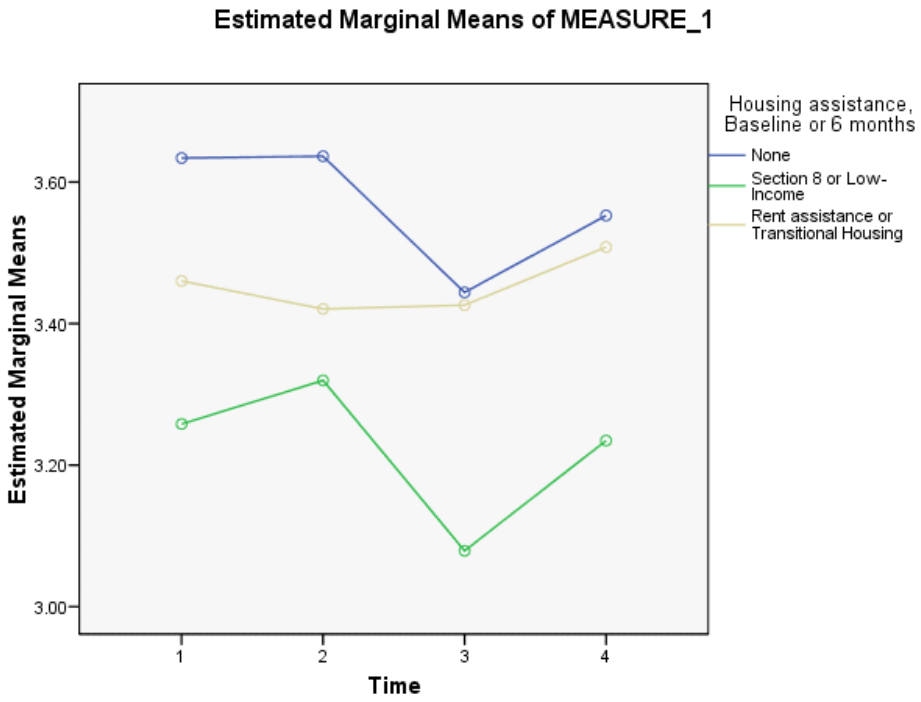
	Baseline	18-month	Possible Range
Parent-Child Attach.	3.46	3.45	1-4
Ped. Sym. Check.	21.87	18.58	0-70
Total Difficulties	12.62	11.35	0-40
Prosocial	8.05	8.13	0-10
Emotional Symptoms	3.60	2.85	0-10
Conduct Problems	2.45	2.21	0-10
Hyper/Inattention	4.48	3.91	0-10
Peer Problems	2.09	2.38	0-10

Table 17. School outcomes children at baseline and 18 months (percentage of children)

	Baseline	18-months
6 or more days missed from school	37.3%	25.8%
1 or more days missed from school because of DV	41.7%	12.3%
School performance declined	23.3%	11.6%

Using repeated measures analysis to test for differences in the change over time between the housing assistance groups, we found significant interactions for the Parent-Child Attachment Scale (p=.022) only. No differences were found for the school outcomes using logistic regression, as shown in Figure 4.

Figure 4: Parent-Child Attachment Scale



Relationship between Change in Housing Instability and Change in Outcomes at 18 months

Since there was a significant improvement in housing stability for the entire sample, we also explored the relationship between change from baseline to 18-months in housing instability and change in the outcomes. Regression analyses were used with the woman's age, score on the CAGE-drug, score on the CAGE-alcohol, and baseline value of the dependent variable as covariates. Change in housing instability was a significant predictor of change in the DA (B=.13, p=.002), change in depression (B=.24, <.001), and change in PTSD (B=.27, p<.001). Improvement in housing stability was associated with improvement in each of these outcome variables.

For the child outcomes, the child's age, baseline value of mom's DA, and baseline value of the dependent variables were included as covariates in the regression analyses. Change in housing instability was a significant predictor of change in the total score for the Child Strength and Difficulty Questionnaire (B=.130, p=.005). Changes in the total score seem to be driven by changes emotional symptoms (B=.129, p=.048), peer problems (B=.243, p=.001), and to a lesser degree conduct problems (B=.125, p=.070), but

not changes in hyperactivity/inattention (B=.060, p=.401). Improvements in housing stability were associated with improvements in the children.

Health Care Utilization

We examined the relationship between severity of violence and housing instability with health care utilization for women and their children. There were 110 women and 185 children who reported having Oregon Health Plan Insurance at both the baseline and 6-month surveys included in the analyses. Since women could have multiple children, the analysis of the child utilization was conducted at the level of the mother with 140 women and the average utilization per child. Utilization was computed for the 6 months prior to and the 6 months post the baseline survey. We used CPT4 codes to create three overall utilization variables: 1) Utilization Days. The number of days with any utilization is the 12 month period 2) Total Utilization. Total number of CPT4 codes across the 12 month period. For this variable since components of the same procedure are billed using the same CPT4 code but different modifiers, if a CPT4 code appeared more than once in a day it was only counted one time. 3) Pharmacy utilization. The count of the number of claims for prescriptions during the 12 month period.

In addition to the overall utilization variables we examined certain subcategories of utilization based on the count of the number of CPT4 codes within the given category. These included: Behavioral Health & Psychiatric Services. Substance Abuse Related, Radiology Services, Office/Hospital/General Care Related, Disease Related, and Tests/Lab/Blood Work. For the children, average child total utilization was computed by taking the total number of CPT4 codes for all children for a given mother and dividing by the number of children with OHP data.

We examined the relationship between utilization and the following variables: Danger Assessment/(DA), WEB, SVAWS physical abuse subscale, SVAWS sexual abuse subscale, SVAWS nonphysical abuse subscale, and HII. Regression analyses were used to test the relationship between the DV and housing variables with the utilization variables. Based on the distribution of the utilization variables, normal distribution models were used for Utilization Days and Total Utilization, negative binomial models were used for the other utilization variables. Age, education and income were included

as covariates in the analyses. First we examined the bivariate relationships, next the covariates were included in the models for those variables with significant bivariate relationships.

Results

The total sample (N=110) had a mean age of 32.46 (SD=8.73, range 19) 11.82% of the sample is Hispanic/Latina. The general health (1-5 scale, higher poorer health) mean=2.59, SD=8.73, range 1 to 5. The mean income =1.34, SD=0.71, 1= $0 to $99 per month, range 1 to 4. The housing instability (0-10 scale, higher more unstable) mean 4.83, SD=2.14, range 0 to 10.

Table 18 summarizes the distribution of the utilization variables for the sample of 110 women.

Table 18: Distribution of utilization variables

	Mean	Median	SD	Min	25th	75th	Max
Utilization Days	26.54	19.00	24.61	1	10.00	36.50	124
Total Utilization	58.85	49.00	46.57	1	21.75	76.00	215
Behavioral Health	2.65	0	5.45	0	0	3.00	34
Substance Abuse	9.26	0	26.69	0	0	4.00	150
Disease Related	2.55	1.00	3.62	0	0	3.00	25
Radiology	3.25	2.00	16.34	0	0	4.00	16
Office/Hospital/General	11.70	8.00	11.40	0	3.00	16.25	49
Tests/Lab/Blood Work	10.42	6.00	13.22	0	2.00	15.00	84
Pharmacy	25.79	14.00	28.86	0	5.00	40.25	145
Child average utilization	17.25	11.00	22.53	0	0.25	21.92	118.20
Child average pharmacy	3.20	1.45	4.71	0	0	4.46	26.00

In the bivariate models, the Danger Assessment was a significant predictor of total utilization, utilization days, office/hospital/general care, radiology, tests/lab/blood work, substance abuse, pharmacy utilization, and child utilization. As scores on the DA increased utilization increased. All variables except utilization days and pharmacy utilization remained significant when the covariates of age, education and income were added to the model. Table 19 summarizes the regression coefficients and p-values from the multivariable models which include the covariates.

Table 19: Regression coefficients and p-values for the DA as a predictor of utilization with covariates of age, education, and income included in the model

Utilization Measure	Coefficient	p-value
Utilization Days	.59	.076
Total Utilization	1.51	.017
Office/Hospital/General	.034	.019
Tests/Lab/Blood Work	.040	.009

Radiology	.038	.027
Substance Abuse	.095	<.001
Pharmacy	.026	.056
Child average utilization	.701	.004

Table 20 presents the means for the utilization variables by categories of the DA. The DA score can be classified into four categories: 1) variable danger (scores of 0-8), 2) increased danger (9-13), 3) severe danger (14-17), and 4) extreme danger (18+). The majority of the sample were in the extreme danger category (79.1%). Table 20 compares the extreme danger category of the DA to all other categories combined.

Table 20: Mean (standard deviation) of utilization by level of danger

Utilization Measure	Level of Danger	
	Variable to Severe N=23	Extreme N=87
Utilization Days	23.87 (23.51)	27.24 (24.98)
Total Utilization	48.96 (37.41)	62.02 (48.54)
Office/Hospital/General	8.35 (6.67)	12.59 (12.23)
Tests/Lab/Blood Work	6.48 (6.01)	11.46 (14.39)
Radiology	1.91 (1.93)	3.61 (4.38)
Substance Abuse	6.74 (18.29)	9.93 (28.55)
Pharmacy	20.26 (20.20)	27.25 (30.67)
Child average utilization	11.56 (19.46)	19.85 (23.44)

We explored three items on the DA: 1) Has he/she ever forced you to have sex when you did not wish to; 2) Is he/she violently and constantly jealous of you; and 3) Has he/she followed or spy on you, leave threatening notes or messages on your answering machine, destroy your property, or call you when you don't want him/her to. Forced sex was related to total utilization, utilization days, office/hospital/general and tests/lab work. Women who report forced sex had on average 24 more services (B=24.3, p=.010, with covariates in the model) and 11 days of utilization (B=10.9, p=.030 with covariates in the model) than women who do not report forced sex. Test/lab utilization remained significant with the covariates in the model (B=.61, p=.007) but office/hospital/general utilization did not. Violently and constantly jealous was related to behavioral health utilization and remained significant when the covariates were added to the model (B= - 1.30, p<.001). Those who report their abuser is violently and constantly jealous had lower behavioral health utilization than those who do not report their abuser is violently and constantly jealous.

Scores on the WEB and the SVAWS Physical Abuse subscale were significant predictors of substance abuse related utilization with increases in the DV variables associated with increases in substance abuse related utilization. Only the WEB (B=.060, p<.001) remained significant when the covariates were added to the model. Scores on the SVAWS Sexual Abuse subscale were significant predictors of test/lab/blood work utilization and remained significant when age, education, and income were added to the model (B=.051, p=.008). The SVAWS Nonphysical Abuse subscale was predictive of behavioral health utilization with higher scores on the SVAWS subscale associated with less behavioral health utilization (B= -.039, p<.001, with covariates included in the model).

In the bivariate models, housing instability was a significant predictor of utilization days, behavioral health, and substance abuse related utilization. Increased housing instability was associated with increased utilization. Behavioral health (B=.162, p=.010) and substance abuse (B=.354, p<.001) remained significant when age, education, and income ethnicity were added to the models. Table 21 presents the means for the utilization variables by level of housing instability

Table 21: Means (standard deviation) for utilization by level of housing instability

	Housing Instability Score		
	0-3 N=37	4-6 N=46	7-10 N=27
Utilization Days	20.86 (12.91)	25.83 (23.78)	35.52 (34.64)
Behavioral Health	1.68 (3.05)	2.52 (4.70)	4.19 (8.34)
Substance Abuse	2.62 (6.02)	7.89 (26.12)	20.70 (39.40)

Cost Analysis

The cost analysis examined the change in costs from the six months prior to the baseline interview and the six month period following the 12-month participation date. The study included women who were recruited from the VOA RA or PCA programs or from RH (n=205). Costs were viewed from a societal perspective. Costs included the total program costs of the participating agencies (VOA or RH) which were collected at the individual level from each agency for the 12 months following enrollment into the study. Costs for judicial/legal/police, DV services (not provided by VOA or RH at baseline, all in the post period), housing service (not provided VOA or RH at baseline, all in the post period), productivity loss, and other (child welfare, food stamps, TANF, WIC, food boxes) were calculated using an average costs

for these services provided by the corresponding agency (e.g., police, legal system). Health care costs were estimated from the literature and statistics published by Medicare. All costs were in 2008 dollars. The amount of services received from non-program agencies were determined by the women's responses to the survey. The Table 22 summarizes the median, minimum and maximum cost for the six months period prior to the baseline date (Prior Period in Table 22) and the six month period following the 12-month participation date (Post Period).

Table 22. Cost of Services for 6 Months Prior to Baseline to 6 Months after the 12-Month Participation Date

	Prior Period		Post Period	
	Median	Min - Max	Median	Min, Max
Judicial/Legal/Police	359	0 – 4,899	0	0 – 5,508
DV	227	0 – 12,201	0	0 – 9,793
Non Program Housing	0	0 – 6,720	0	0 – 10,080
Other	2,188	0 – 9,683	2,646	0 – 31,332
Productivity Loss	538	0 – 7,135	155	0 – 5,460
Health Care	1,846	0 – 105,462	1,386	0 – 95,280
Program Costs without kids	2,322	0 – 11,441	NA	NA
Program Costs including kids	2,538	0 – 43,414	NA	NA

Qualitative Analysis

Using a qualitative descriptive technique, the study team conducted initial manual analysis of all transcribed interviews. To gain a global understanding of the content and context of each narrative and to identify possible themes to explore, we first read each interview line-by-line in their entirety making general comments and identifying related themes to get a comprehensive view of the women's experiences accessing, securing and maintaining safe and stable housing. Then, we selected excerpts from the narratives that specifically addressed the themes and patterns that had emerged. This step was more focused and directed, and ascribed themes to exemplars from the narratives. Themes that elicited similar conceptual relationships reflecting factors of housing stability/instability were clustered in categories and compared by all the authors. Next each author read one or two of the interviews again, developed a brief description of the participant focusing on housing, children, level of danger, barriers to services and services received. Each of the authors then selected one or two exemplars that illustrated themes that had

emerged in the previous process, and examined the narrative for additional themes and exemplars. The team reviewed all additional themes suggested and discussed their relevance to the study.

Four major themes emerged from the qualitative interviews that highlighted the interactions among housing instability, level of danger in the abusive relationship and housing and DV services. The themes and associated exemplars are shown in Table 23.

Table 23 Major Themes and Associated Exemplars

Theme	Exemplars
Lack of available, affordable, and stable housing decreases survivors' ability to attain safety	"They [the kids] don't feel safe here anymore. They want to move too. But the whole thing is, it's all financial, everything's financial. If I had the money to do so, I would be gone, you know, that's one of the things you lose is choices and we either have to move to somewhere less, in a bad neighborhood, or we have to stay where we are." "We left and I couldn't find a single place to sleep or anything and I went back. I couldn't find anywhere to go. I didn't know about the help that there was. I didn't know anything. Once I left at night, walking, and my two children say let's go, mommy, let's go. They were very little. I left and went walking all along Division because I was at 158th and Division. I went along walking, um, we got there and I didn't have money for the bus and I didn't even know where I was going but, right then, I told them it was best for us to go back."
Survivors face significant barriers to affordable, safe and stable housing	"The way they set it up, is you're at everybody's mercy and that's really aggravating when you're already at everybody's mercy, you know. So the people who are supposed to help you make sure you know, you're at my mercy and then the people who abuse you, make sure you know, you're at my mercy. So what's the difference, aren't they both abuses?" "I would have found work even more quickly but they wouldn't pay for daycare unless I was in an employment training program. So I only could look, like, actually go out and look and go to interviews if I had a babysitter. I had to find somebody that had time and would do it for free. Yeah, so I had to do it completely on my own."
Survivors exhibited creativity and resourcefulness when access to stable housing was limited	"I was living out of my car and I had the big Rubbermaid totes. I had one for Alexia's clothes, one Elijah's clothes, one for my clothes, and one for all our socks and underwear. And, I would have some select toys in my car that we would take with us everywhere. We lived in about five different places so that's why I had to have those tubs; because it wasn't like we were staying in any one place. We would stay somewhere maybe for a couple of days, stay somewhere else for a week."
Survivors identified a variety of supportive services specifically tailored to address their needs	"I think that just the individual attention that she [the advocate] was able to give to me which was to find out what my needs were, what I was looking for and then she just, she just stayed on it. She just didn't give up." "They helped me get in and pay for the first two months and for my rent and they still continue to help me. And she tells me how I'm going to prepare myself, how to prepare myself, so when the day they stop helping me how am I going to do it. And they help me with whatever I need."

VII. Lessons learned and recommendations

The findings from the study have significant implications for the prevention of revictimization of women and children through improved access to affordable housing and informing and expanding housing options and policies. We have just begun to explore in our data analysis, the complex relationship between housing instability, danger, service utilization and outcomes for survivors. It is our expectation that further data analysis will more fully develop those themes.

Housing Instability Index. The SHARE project developed a housing instability index which exhibits good validity and reliability and goes beyond the standard distinction between homeless or housed. Using this scale, we found important effects of housing instability on health and well-being for both women and their children in terms of health, victimization overtime for the entire sample. This scale with additional testing can be used by other IPV researchers, and with the additional of IPV specific questions can be used by housing, poverty and homeless researchers. We are currently using the scale in other studies to provide data to continue our psychometric work.

Retention

A key learning of this study was how to structure a project to maintain high retention of difficult to retain study participants. The study team as able to achieve a 94% retention rate over the 18 month study period with IPV survivors with housing instability using a variety of retention methods (Clough et al., 2010, attached). This study utilized the usual safety focused methods of retaining IPV participants such as telephone calls to multiple safe contacts; email and postal mail; site and home visits; emergency and service provider contacts; and record reviews (Dilworth-Anderson and Williams 2004; Grant and DePew 1999; Lyons et al. 2004). Retention strategies for the SHARE project expand those methods in a number of ways, first , by developing a study infrastructure that promoted retention and safety. Adequate time and resources were budgeted to allow for the retention efforts needed to retain our study sample. We recognized that many of our research participants would be dealing with high levels of danger, housing instability and financial insecurity, and providing sensitive and potentially traumatizing information about their victimization, and may be difficult to retain without the proper staff time dedicated to retention

efforts. Additionally, the essential extensive record keeping was carefully planned and included funds for the creation and use of a tracking database. RA/I's were selectively hired, highly trained, and high expectations were set for successful retention, all with a supportive team approach.

We implemented an individualized plan for contact, and RA/I's worked with participants to ensure that the most complete, up to date, and safe contact information was collected. RA/I's focused on building and maintaining a strong relationship with participants. To provide a safe and supportive experience during interviews, it was critical that the RA/I's have the skills to ask sensitive questions and the abilities to demonstrate sensitivity to participants' needs and a non-judgmental response.

Finally, The team made use of technology in addition to the usual methods to maintain contact. We were able to utilize social media sites such as MySpace and Facebook to contact participants. We also utilized public records searches and other online searches to locate difficult to find participants.

Community Collaboration

This collaborative study brought together the expertise, capacity and community support that assured excellent management and research capacity, cooperation with funding agency and successful completion of the study. Our research design and workplan demonstrates the collaborative nature of our community efforts to end violence against women. Though there are challenges in implementing a truly community based, collaborative approach to implementing a research study, the results are worth the effort to build this type of research team. Community collaboration was key to the success of this research project and significantly deepened theunderstanding of our results and their implecations for policy, practice, funding and further research. The collaboration succeeded for several reasons:

1. It was based on relationships which had been built over time;
2. The community partners were included in early planning, including the response to the grant proposal;
3. Regular meetings and consultations were built into the research team's priorities and structure; e.g., monthly team meetings with key community partners and quartly meetings with all community partners;

4. Funding for community partners to allow them to dedicate staff time to consulation, meetings, referring clients, discussions of data and development of manuscripts;
5. All manuscripts were reviewed by at least one community partner before submission and many had community partners as co-authors on them; and
6. Community partners were included in all parts of the project, over the entire span of the project.

Policy, Practice and Funding Implications

The SHARE project has and will continue to bring forward significant policy, practice, research and funding recommendations. The following are some of the major recommendations and

Housing Policy and Funding:

The Federal government should:

1. Increase funds and prioritization of transitional and permanent funding through the Office of Violence Against Women (OVW) and HUD, respectively.
2. Expand the definition of "homelessness" to include those IPV survivors who are doubled up and increase efforts to count those who are doubled-up in highly unstable situations, but not homeless.
3. Implement subsidized rental programs to address the on-going financial hardship faced by many survivors to allow them to concentrate on other basic needs for self and children, such as health, education and skills training to secure a job with a living wage.
4. Increase emphasis at the Federal level (HUD specifically) to assure that homeless families and IPV victims receive a higher priority for housing and supportive services.

Local housing initiatives and programs should adopt policies and practices which take into account the individualized needs of IPV survivors in terms of the type of housing needed and do not add to the barriers IPV survivors face, such as being turned down for an apartment due to a history of rent, credit or criminal problems, multiple moves. In addition, housing development corporations and non-profits should address the quality of housing stock and safety issues.

DV service providers and their funders should take steps to increase survivors' access to stable housing in the following ways:

1. Increase funding for housing specifically for IPV survivors throughout the victim services system.

2. Provide training for staff of DV victim services programs on housing resources and increase emphasis on assisting survivors to access and fully utilize existing housing resources.
3. Develop or improve relationships and communication with housing programs and apartment managers/owners to reduce the housing barriers identified by survivors.
4. Provide cross-training for housing programs and DV advocates to increase understanding of needs of survivors and children, barriers, programs and policies.

Children, IPV and Housing

1. Increase programs that provide or support affordable and available stable, permanent housing for IPV victims with children – address multiple barriers – previous evictions, etc.
2. Allocate funding at the Federal level for programs/supports for children exposed to IPV that are built into advocacy services for IPV victims.
3. Reform child welfare policies so that the child's stability is not further disrupted by removal from the non-abusing parent, and that the non-abusing parent's housing instability is addressed more directly.
4. Ensure that children's mental health, health, mentoring, school success or other programs designed to decrease behavior problems or increase academic success are trauma-informed, address the issues of housing instability and IPV exposure directly, and link families to DV and/or housing supports.
5. Expand existing housing programs (ready to rent, life skills, vouchers) to address safety, impact of abuse and housing needs through a trauma-informed model for IPV victim and children.

Research

Research on IPV, homelessness and housing has been to a large part separate endeavors with little cross-discipline discussion or publication. The HII provides an opportunity for researchers to explore the dual impact of housing and IPV; thus, it is important that research on homeless women, IPV survivors and other populations include assessments for both IPV and housing instability.

VIII. Publications/presentations/other products resulting from project activities

Papers:

*Baker, C., Billhardt, K.A., Warren, J., Rollins, C., Glass, N.E. (2010). Domestic Violence, housing instability, and homelessness: A review of housing policies and program practices for meeting the needs of survivors. *Aggression and Violent Behavior*, 15(6), 430-439.

*Clough, A., Wagman, J., Rollins, C., Barnes, J., Connor-Smith, J., Holditch-Niolon, P., McDowell, S., Martinez Bell, E., Bloom, T., Baker, C., Glass, N. (2010). The SHARE Project: Maximizing participant retention in a longitudinal study with victims of intimate partner violence. *Field Methods*, Prepublished October 26, 2010, DOI: 10.1177/1525822X10384446.

Njie-Carr, V., Draughon, J., Rollins, C., Clough, A., Barnes, J., Glass, N. (2010) "Having Housing Made Everything Else Possible": Affordable, Safe and Stable Housing for Women Survivors of Violence. Manuscript submitted for publication.

*Rollins, C., Glass, N. E., Billhardt, K. A., Clough, A., Barnes, J., Hanson, G., Bloom, T. (2010). Housing instability is as strong a predictor of poor health outcomes as level of danger in an abusive relationship: Findings from the SHARE study. Manuscript submitted for publication.

*Rollins, C., Holditch-Niolon, P., Glass, N., Billhardt, K, Connor-Smith, J., Baker, C. (2009) An innovative approach to serving the needs of IPV survivors: Description of a CDC-funded study examining the Volunteers of America Home Free Rent Assistance Program. *Journal of Women's Health*, 18(6), 775-778.

*Papers attached.

Topics for papers planned but not yet written include: 18 month outcomes, children's outcomes, housing instability index, cost of moving from unstable to stable housing, utilization of health care among IPV survivors, and process evaluation outcomes.

Presentations:

Baker, C., Glass, N.E., Billhardt, K. (2007). Program and Policy Implications. Presentation at Society for Community Research and Action. Pasadena, CA.

Baker, C., Holditch Niolon, P., Oliphant, H. (2007). A descriptive analysis of existing temporary housing programs for survivors of intimate partner violence in the U.S. Presentation at Society for Community Research and Action. Pasadena, CA.

Billhardt, K. (2008). Housing First with Survivors of Domestic Violence. Presentation at the Center for Survivor Agency and Justice Housing Institute. Washington, DC.

Glass, N. & Clough, A. (2007). Using Community-Based Participatory Research to Develop Evidence-Based Domestic Violence Services. Presentation at the 15th Nursing Network on Violence Against Women International conference. Ontario, Canada.

Glass, N., Rollins, C., Billhardt, K., Perrin, N., Connor-Smith, J., Hanson, G. (2009). The Impact of Housing Instability on Health and Work Outcomes for Abused Women. Presentation at Family Violence Prevention Fund. New Orleans, LA.

Njie-Carr, V. (2010). Safe and Affordable Housing for Women Survivors of Violence. Presented at International Congress on Women's Health. Pennsylvania, PA.

Njie-Carr, V., Draughon, J., Rollins, C., Clough, A., Glass, N. (2009). Safe and Affordable Housing for Women Survivors of Violence. Poster Presentation at National Institute for Nursing Research. Washington, DC.

Rollins, C. (2007). A Study of the Effectiveness of a Housing Intervention for Battered Women. Presentation at the National Alliance to End Homelessness. Oakland, CA.

Rollins, C. (2007). SHARE Project: A Study of the Effectiveness of a Housing Intervention for Battered Women. Presented at the National Alliance to End Family Homelessness. Oakland, CA.

Rollins, C., Baker, C. (2007). The Link Between Domestic Violence and Housing Instability. Presentation at Society for Community Research and Action. Pasadena, CA.

Rollins, C., Glass, N.E. (2007). Social Justice through Community-Based Participatory Research. Presentation at the OCADSV Annual Conference. Hood River, OR.

Rollins C., Glass, N.E. (2007). Effectiveness of a Housing Intervention for Battered Women. Presentation at Society for Community Research and Action. Pasadena, CA.

Other Products:

Rollins, C., Billhardt, K., Clough, A. (2010). Baseline Data. Fact Sheet.

Rollins, C., Billhardt, K., Clough, A. (2010). Domestic Violence: A Different Kind of Homelessness. Fact Sheet.

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