SERVICE TRAINING AND RECOVERY (STAR) PROGRAM: AN INTERDISCIPLINARY COMMUNITY-BASED PROJECT TO MITIGATE RR-PTSD AMONG KENTUCKY WOMEN

Margaret Melissa Brown
University of Kentucky

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Margaret Melissa Brown, Student
Glen Mays, PhD, MPH, Major Professor
Wayne Sanderson, PhD, MS, Director of Graduate Studies
SERVICE TRAINING AND RECOVERY (STAR) PROGRAM: AN INTERDISCIPLINARY COMMUNITY-BASED PROJECT TO MITIGATE RR-PTSD AMONG KENTUCKY WOMEN

Margaret Melissa Brown

The College of Public Health

University of Kentucky

2016
SERVICE TRAINING AND RECOVERY (STAR) PROGRAM: AN INTERDISCIPLINARY COMMUNITY-BASED PROJECT TO MITIGATE RR-PTSD AMONG KENTUCKY WOMEN

ABSTRACT OF CAPSTONE

A Capstone project submitted in partial fulfillment of the requirements for the degree of Doctor of Public Health in the College of Public Health at the University of Kentucky

By:
Margaret Melissa Brown
Lexington, Kentucky

Director: (Glen Mays, PhD
Lexington, Kentucky

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ABSTRACT OF CAPSTONE

SERVICE TRAINING AND RECOVER (STAR) PROGRAM: AN INTERDISCIPLINARY COMMUNITY-BASED PROGRAM TO MITIGATE RR-PTSD AMONG KENTUCKY WOMEN

Background: Kentucky has greater prevalence of sexual assault compared to the US overall, 37.5% versus 35.6% of all assault crimes respectively, translating to roughly 638,000 victims within the Commonwealth [1]. Research identified sexual violence as the number one factor in development of PTSD among women. There are four times the prevalence of PTSD in victims of sexual violence versus other forms of trauma. [2, 3] The STAR program utilizes skills-based training methods to empower participants through improving a sense of safety and security, self-confidence, and self-efficacy to mitigate RR-PTSD symptoms leading to negative health outcomes.

Literature Review: Existing research has documented improved perceptions of safety among study participants utilizing animal assisted therapy (AAT) experiencing a traumatic stress situation. Unlike AAT isolated to clinical settings, service dogs are allowed under ADA to be with their client at all times, to provide ongoing condition management and disability assistance. Zapor et al. identified tailored interventions, fostering reliable and satisfying social support networks, as a vital component of successful programs addressing victims of violence [41]. Leech and Littlefield identified the role that positive support groups can have on
the healing process of survivors [42] including: teach and promote use of coping skills, decrease social isolation, and to normalize experiences through engagement with others who have experienced similar trauma[22].

**Methodology:** The population of this program was adult (19 to 64 year old) women who were survivors of sexual assault and had a diagnosis of RR-PTSD. The program had three pillars: Safety and Security, Self-Confidence, and Self-Efficacy. The program had three programmatic components: service dog training classes 1-3 times per week, RR-PTSD face-to-face support group session once a week, and a daily social networking component. Analysis consisted of: patterns of change in measures, variation patterns across participants, direction and magnitude of change, pattern recognition, and whether change movement was in the expected direction. Median was utilized for reporting central tendency due to: the small number of participants, the presence of potential data outliers, inability to assume normal distribution, and the use of ordinal data.

**Results:** A completion percentage of approximately 93%, adherence to attendance protocols, and successful implementation by community partners answers affirmatively that the program was feasible to implement. The C-SSRS, PCL-5, Stanford Adapted Illness Intrusiveness Rating Scale, and the Stanford Chronic Illness Self-Efficacy Scale were successfully administered. The data gathered, analyzed and reported answers affirmatively the feasibility of obtaining measurable data.
**Conclusion:** Though complex and robust statistical analysis were not reasonable given the small cohort size for this pilot study, simple trend analysis for magnitude, directionality and trends towards expected outcomes were undertaken. Results suggest positive for improvement of symptomology for RR-PTSD, increased self-efficacy, self-reported improved sense of safety, security, self-confidence and self-esteem. All instruments show improvement from baseline, positive impact, and meet expected directionality for change. These outcomes all suggest a program that is likely to be beneficial to participants.

**KEYWORDS:** (Sexual assault, rape, post-traumatic stress disorder, suicide, service dog)

Margaret Melissa Brown
Signature of Student

Date: August 18, 2016
SERVICE TRAINING AND RECOVERY (STAR) PROGRAM: AN INTERDISCIPLINARY COMMUNITY-BASED PROJECT TO MITIGATE RR-PTSD AMONG KENTUCKY WOMEN

By
Margaret Melissa Brown
2016

Glen P. Mays, Phd, MPH
Capstone Director

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SERVICE TRAINING AND RECOVERY (STAR) PROGRAM: AN INTERDISCIPLINARY COMMUNITY-BASED PROGRAM TO MITIGATE RR-PYSD AMONG KENTUCKY WOMEN

Margaret Melissa Brown

College of Public Health

University of Kentucky
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CHAPTER 1
Introduction: The Problem of Sexual Violence Related
Post-Traumatic Stress Disorder

Background of the Project

Violence prevention has been declared a public health priority via worldwide leaders such as the Centers for Disease Control and Prevention, the National Institute of Mental Health, and the World Health Organization [4-6]. Sexual violence impacts more than victims alone; generational ripples from sexual and physical assault affect families and communities. An upstream prevention approach through public health efforts can both prevent and mitigate the impact of sexual trauma on populations [5].

Within Kentucky, a greater average of sexual assault cases exist each year compared to the nation; creating a burden on both the community and existing health care system attempting to address the health consequences associated with these traumas [1, 7]. Annually, Kentucky has a greater prevalence of sexual assault compared to the US overall, 37.5% versus 35.6% of all assault crimes, translating to roughly 638,000 victims within the Commonwealth [1]. In addition to the prevalence of sexual assault, Kentucky suffers from a shortage of mental health professionals. The Health Resources and Services Administration reports 105 of the 120 counties within the state are mental health professional shortage areas (see figure 1).
The prevalence of sexual assault combined with the shortage of mental health treatment contribute to the existence of sexual violence related post-traumatic stress disorder, termed rape-related post-traumatic stress disorder (RR-PTSD) among sexual assault victims, many of whom are never treated for this condition.

Figure 1. Mental Health Professional Shortage Areas, Kentucky, 2016.

Purpose of the Study

The purpose of this feasibility study was to create a pilot program to mitigate RR-PTSD among Kentucky women through an interdisciplinary, community-based approach and to evaluate outcomes for patient experience, barriers to implementation, and recommend programmatic changes.
Statement of the Problem

The problem undertaken for this project was mitigation of RR-PTSD among Central Kentucky women. To address this problem, this project consisted of the development of a program capable of being implemented with minimal resources in Central Kentucky, to allow community partners to recruit and retain participants, and to capture data that could be analyzed to identify areas of program improvement. Practical and appropriate outcomes are presented below; however, before proceeding, it is necessary to first define key terms and program components to facilitate a clear understanding of the nature and scope of the project.

Sexual Violence

Sexual violence is defined by the Centers for Disease Control and Prevention (CDC) as "a sexual act committed against someone without that person's freely given consent. This involves actions including (but not limited to): rape, sexual assault, attempted or completed penetration, sexual harassment, intimate partner violence, being forced to penetrate someone else, non-penetrating sexual contact experiences (e.g. fondling) or non-contact experiences (e.g. forced to watch a sexual act)." [4]

Rape-Related Post-Traumatic stress Disorder (RR-PTSD)

Research has identified sexual violence as the number one factor in development of PTSD among women. The National Women's Study found approximately four times the prevalence of PTSD in victims of sexual violence versus other forms of trauma. [2, 3] Dean Kilpatrick calculates 3.8 million adult
American women have RR-PTSD, including 1.3 million women (11%) who have persistent RR-PTSD, and roughly 211,000 women who develop RR-PTSD annually.[9]

Service Dogs

The American Disabilities Act (ADA) defines a service animal as "any guide dog, signal dog, or any other animal individually trained to do work or perform tasks for the benefit of a person with a disability." [10] Federal laws protect the rights of individuals with disabilities to be accompanied by their service animals in public places. Service animals are not considered "pets" but are legally an assistive technology utilized to mitigate a disability just like a wheelchair or a heart monitor.[10]

Overview of Project Processes

A collaborative interdisciplinary team was brought together for this project. Community partners consisted of Pawsibilities Unleashed (a service animal training facility), University of Kentucky (UK) College of Public Health (CPH), Eastern Kentucky University (EKU) Department of Clinical Psychology, the EKU Psychology Clinic, and Bluegrass.org (a behavioral health system). This interprofessional team identified the need for a project addressing a non-pharmaceutical program to mitigate RR-PTSD among women in Kentucky.

The Service Training and Recovery (STAR) program matched interested RR-PTSD clients with a service animal after evaluation by the team to ensure the STAR Program was an appropriate intervention for the client's individual needs.
The STAR Program utilized skills-based training methods to empower participants through improved communication skills and avoidance of high-risk behaviors leading to negative health outcomes.

Development of the program extended from January 2015 to August 2015, including numerous revisions to meet the resource capabilities of the community partners. The STAR pilot program was implemented by the community partners from October 2015 to February 2016. Prior to consideration for further implementation, a careful analysis of data was necessary to determine the strengths and weaknesses of the program. Additionally, determining sustainability was important for future programmatic strategy and development.

The goals of this feasibility study focus upon two research questions:

1) Is the STAR program feasible to implement? And,

2) Is it feasible to obtain measurable outcomes from STAR participants with RR-PTSD?

Analysis of the STAR program focused on trends and trajectories, rather than specific clinical outcomes, as the clinical significance is beyond the scope of this project. To that end, this project included three steps for a feasibility analysis. First, completion percentage was calculated through pre- and post-intervention counts of participants to identify percentage of those who completed the program.

Second, to analyze participant experience, quantitative analysis was conducted on pre-existing de-identified data to identify changes between pre-and post-test instruments. General trends of direction, magnitude, and patterns of
change from pre- to post-scores indicated the feasibility of gathering data to analyze in future iterations of the program. Qualitative analysis was conducted from post-program narrative interviews. Due to small sample size, counts of phrase or word trends will be utilized to report qualitative results.

Last, changes were recommended for the program based upon the quantitative and qualitative data analysis. Together, these three steps provide a robust analysis of the feasibility of this program to inform decisions for future implementation.

This Chapter 1 introduction has given a brief overview of the prevalence of sexual assault, the implications of RR-PTSD on population health, and the general outline of the goals of this dissertation. The proceeding chapters describe the progression of this project and give greater detail on the development and evaluation of the program.

Chapter 2 focuses on a literature review of the existing problems surrounding sexual assault violence prevention utilizing a public health prevention framework, RR-PTSD impacts on population health throughout the lifespan, and implications for the future related to sexual assault and RR-PTSD impacts on the US health system if these issues are not addressed and prevention efforts undertaken.

Chapter 3 addresses the methodology of this project and includes: the research design, population and sample, recruitment method, instruments/measures, and program costs. An analysis plan details quantitative and qualitative data analysis, including feasibility metrics.
Chapter 4 presents the implementation data and results. This section analyzes results, identifies trends in qualitative data, identifies particularly helpful comments and suggestions, and provides research question outcomes. This section includes de-identified data results reported in aggregate and trends analysis of interview narratives from participants.

Chapter 5 draws the project to a close by presenting an overall summary discussion of the results with conclusions and recommendations. This includes: implications for public health and the health care system within the US, feasibility determination, sustainability, and practical recommendations for study replication or expansion. A brief final summary shows the trajectory of the project, details important steps in the feasibility evaluation, and frames this dissertation.

Scope and Importance of the Study

This pilot project addresses a gap in existing literature regarding the use of service animals outside of clinical settings. Additionally, this project elaborates on existing research by focusing on RR-PTSD; most research on PTSD and service animals to date has been for combat veterans. Therefore, this project is relevant and necessary for bridging knowledge gaps in the existing literature.
CHAPTER 2
LITERATURE REVIEW: THEORETICAL AND EMPIRICAL FRAMEWORKS FOR UNDERSTANDING INTERVENTIONS FOR SEXUAL VIOLENCE/RAPE RELATED POST-TRAUMATIC STRESS DISORDER

The following review of the literature is a summary of key concepts foundational to understanding sexual assault, RR-PTSD, and service animals. It represents theoretical and empirical knowledge gathered from the disciplines of public health, sociology, psychology, and family studies. The works cited were collected from books, book chapters, published and unpublished journal articles, newspaper articles, federal databases, and websites.

The databases and sources used to identify the scholarly literature in these areas included: Medline (1990-2016) and PUBMED (1990-2016); as well as conference proceedings, papers, reports, bibliographies, and reference lists. The key words and phrases for the searches included: sexual assault, rape, post-traumatic stress disorder, PTSD, rape-related post-traumatic stress disorder, RR-PTSD, service dog, service animal, disability and suicide. A secondary review of writings referenced in the bibliographies of key works and those recommended by experts, peers, and colleagues augmented the process.

The first portion of the chapter identifies a theoretical and empirical base for the STAR program foundation. The second portion of the chapter summarizes major reviews and meta-analyses on collaborative approaches to mitigate RR-
PTSD utilizing service dogs, support groups and social networking. This section concludes with a summary of the implications of existing research for collaborative interdisciplinary programs addressing RR-PTSD. These works form the basis for using a theoretical foundation to inform development of an interdisciplinary community-based program utilizing service dogs, professional therapy, support group and social networking approach to mitigate RR-PTSD among women in Kentucky.

Theoretical Foundations

Theory provides an essential underpinning to the structural framework of this project. A broad perception of how society views sexual assault, the impact of sexual assault on survivors, and evidence-based practice for the best methods of intervention are gleaned through a review of theory across multiple disciplines. Understanding that analysis of theory could be an entire self-contained project, this review is limited to understanding the major consequences of sexual assault. For this project, theory was explored to provide the basic framework for development of the STAR program and testing the feasibility of the program.

The first step in determining the theoretical underpinnings of the STAR program required grounding in theories addressing rape and sexual assault of women. Specifically, why does this violence occur and what consequences does it have on the victim, perpetrator, and society? Genetic, evolutionary, and developmental theories were reviewed to provide a fundamental theoretical overview to inform STAR program development.
Evolutionary Theory

Thornhill and Palmer's evolutionary theory of rape was based upon the assertion that by circumventing the female's wishes males who utilize sexual force were able to reproduce more effectively [11] in prehistoric and ancient cultures. Therefore, these traits would be more likely to be seen in future generations due to the increased likelihood of procreation.

Breaking the generational cycle of violence was a driving desire among the collaborating community partners for this project. Thus, understanding how generational patterns may develop and be interrupted assist in informing program development. Impact and sustainability of programs also depend upon identifying deep rooted cultural norms and mores found in patterns of sexual violence within communities, families, and social niches.

Evolutionary theory explains the generational cycle of rape and sexual assault but fails to address why a male would choose not to rape, as well as lacking generalizability to modern cultures [11, 12]. To address these missing components we then looked to self-control theories.

Self-Control Theories

Obviously, not all sexual predators are male, and not all males sexually assault victims. Three renowned theories identify self-control as the missing component that shapes the predator.

Polaschek and Ward's self-control theory was based upon the belief that the male sex drive is uncontrollable, thus making it impossible for males to be responsible for their sexual actions [13]. This theory focused on the recurrent
criminal perpetrator but also failed to explain why some men do not perpetrate sexual violence.

Gottfredson and Hirschi’s low self-control theory states, "since criminal acts provide immediate gratification, criminals will engage in them because they are not able to defer gratification." This immediate gratification may explain recurrent criminal sexual assaults, but does not explain why perpetrators first engage in their actions.

Baumeister’s narcissistic reactance theory is based upon the concept that narcissists take rejection as a personal affront, at which time rape may then fulfill their sense of entitlement over others [14]. This theory introduces the issue of rape as a result of a perpetrator’s desire for power and control over the victim.

These theories pinpoint a lack of self-control, the inability to delay gratification, and the need for power and control of the victim as predominate causes for rape. The consequences women experience after a sexual assault are predominantly related to lack of control and feelings of helplessness, thus contributing to a lack of safety and security.

Feminist Theory/Theory of Gender and Power

Australian sociologist Raewyn Connell published a series of gender-based studies based upon the underlying concept of gender as a dynamic social structure defined not by biologic sex but by social transactions defined as gendered[15]. In 1987, she published the ecological Theory of Gender and Power to address the interaction of societal and institutional levels with the divisions of labor, power, and cathexis (social norms) to create a framework
housing inherent gender inequalities and disparities [16, 17]. In nearly three decades since its inception, psychosocial and public health researchers have identified risk factors negatively impacting women’s health related to the intersections of levels and divisions defined within the Theory of Gender and Power. [3, 15, 18]

The sexual division of labor included socioeconomic exposures such as poverty, low educational attainment, and limited access to resources in addition to risk factors such as ethnic minority status. Within the sexual division of power women face physical exposures such as sexual or physical abuse and behavioral risk factors including poor assertive communication skills, lower self-efficacy to manage existing health conditions, and limited perceived control over their own life. [15] The structure of cathexis (social norms) included social exposures such as religious beliefs, conservative culture, and family supportiveness while personal risk factors included history of depression, psychological distress, and body image disorders. [15, 19]

Tackling underlying social structure steeped in patriarchy and hegemonic masculinity is a monumental task that takes generations to see long-term health effects and changes within societal norms. However, research based on the Theory of Gender and Power enabled the development of interventions targeting the exposures and risk factors creating increased risk of negative health outcomes for women.

Utilizing this theoretical framework, intervention efforts for the STAR program focused on specific aims such as improved self-efficacy, decision-
making, assertive communication skills, and addressing socioeconomic disparities to promote health and prevent of negative health outcomes in women.

**Social Cognitive Theory and Self-Efficacy**

Bandura and Walters developed Social Cognitive Theory to promote observational learning and vicarious reinforcement. With the addition of self-efficacy to this model years later, a triadic reciprocity foundation was laid for Bandura's theory of reciprocal determininism. This view states, "(a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in a triadic reciprocity" [20] (see figure 2).

Figure 2. Triadic reciprocity.

Source: Social Cognitive Theory. [20]
Further, Bandura states:

The reciprocal nature of the determinants of human functioning in social cognitive theory makes it possible for therapeutic and counseling efforts to be directed at personal, environmental, or behavioral factors. Strategies for increasing well-being can be aimed at improving emotional, cognitive, or motivational processes, increasing behavioral competencies, or altering the social conditions under which people live and work.

Graham and Weiner identified that in psychology and education, self-efficacy has been identified as a consistent predictor of behavioral outcomes, more so than any other motivational constructs. To implement a successful program participants must perceive they are capable of change, not merely possessing the ability to change; that is, as stated by Pajares, "clearly, it is not simply a matter of how capable one is, but of how capable one believes oneself to be." [20] Thus, self-confidence, self-esteem and self-efficacy play an extremely important role in success or failure of interventions.

In public health, a project undertaken to affect behavioral health can utilize this model of triadic reciprocity. Fitting nicely into the socioecological model as shown in figure 3, we can see that even within concentric circles of the model there are reciprocal factors affecting decision making that flow between levels and within levels. Based upon this knowledge, the three pillars supporting the program concept were developed to address: safety and security, self-confidence, and self-efficacy.
Empirical Evidence on Sexual Violence and PTSD

*Sexual Violence*

Research from the CDC National Intimate Partner and Sexual Violence Survey (NISVS) and the National Institute of Justice (NIJ) National Violence Against Women Survey (NVAW) report epidemic prevalence of sexual violence in the United States. Roughly 1 in 5 women and 1 in 71 men experience rape in their lifetime. [4] Approximately 4.8 million intimate partner rapes and sexual assaults occur yearly with verbal abuse by a partner the most likely predictor that a woman would be sexually and physically victimized as part of a systematic pattern of dominance and control within domestic violence situations. [23, 24]

Sexual violence consists of sexual assault, child sexual abuse, incest, intimate partner sexual violence, sexual harassment, and elder sexual abuse [25]. It is not unusual for survivors to experience multiple types of sexual violence, possibly concurrently, at multiple times of the lifespan.
Table 1. Potential Impacts of Sexual Violence.

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<th>Area of Impact</th>
<th>Examples</th>
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<tr>
<td>Physical Health</td>
<td>- Undereating or overeating</td>
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<td>- Insomnia/disruptions in sleep routine</td>
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<td>- Physical injuries caused by the violence</td>
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<td>- Sexually transmitted infection</td>
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<td>- Gynecological and menstrual problems for female survivors</td>
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<td>- Chronic pain, headaches, or stomach aches</td>
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<td>Emotional/Psychological Health</td>
<td>- Increased use of drugs and/or alcohol</td>
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<td>- Nightmares or flashbacks</td>
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<td>- Hypervigilance</td>
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<td>- Self-harming, reckless, or combative behaviors</td>
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<td>- Feelings of numbness</td>
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<td>- Depression and/or anxiety</td>
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<td>- Fluctuating emotions</td>
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<td>- Self-blame or guilt</td>
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<td>- Phobias</td>
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<td>- Low self-esteem</td>
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<td>- Thoughts of suicide or suicide attempts</td>
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<td>- Eating disorders</td>
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<td>- Feelings of shame or being dirty</td>
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<td>Social Lifestyle</td>
<td>- Changes in daily routine</td>
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<td>- Staying at home or only going outside when accompanied by someone else</td>
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<td>- Concerns with intimacy in relationships</td>
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<td>- Difficulty in developing long-term relationships</td>
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<td>Sexual Health</td>
<td>- Discontinuing all sexual activity or becoming hypersexual</td>
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<td>- Disconnecting from one’s own sexuality</td>
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<td>- Disinterest in sexual activity</td>
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<td>- Distrust of sexual contact</td>
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<td>- Concerns with intimacy in sexual relationships</td>
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<td>Spiritual/Religious Practice</td>
<td>- Discontinuing spiritual or religious practices</td>
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<td>- Difficulties seeking support through a spiritual or religious community</td>
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Source: The Power of Social Connection.[22]
The trauma of sexual violence is further complicated by physical harm, social and familial stigma, and the risk of sexually transmitted infections. [19] Victims may suffer lifetime health impacts from sustained injuries, chronic pain, heart disease, diabetes, depression, anxiety, panic attacks and post-traumatic stress disorder (PTSD), suicidal ideation and attempts (See Table 1). [23, 24]

**Rape-Related Post-Traumatic Stress Disorder (RR-PTSD)**

Rape Trauma Syndrome (RTS), also known as Sexual Assault Trauma Syndrome (SATS), is a short-term effect of sexual assault consisting of three phases. The acute phase involves a highly emotional period, which can be expressive (i.e. crying, yelling) or controlled (i.e. flat affect, subdued). This phase is followed by the outward adjustment phase, where the victim attempts to reintegrate into their previous life and activities. The final phase is the long term reorganization phase, consisting of integration of the assault into their view of self and resolves their feelings regarding the event. Psychological support during this time is critical; prior research has identified that lack of support during this time is directly related to likelihood of developing rape-related post-traumatic Stress disorder (RR-PTSD). [26]

RR-PTSD symptoms can be highly disruptive to daily life. Intrusive symptoms may include: intense fear, helplessness, terror, flashbacks of the event, and nightmares of the event. Avoidance symptoms may include: association of words, happenings or "triggers" with the event, avoidance of anything that may trigger an event, denial, numbness, detachment or a feeling of "unreality", feeling depressed and isolated. Hyperarousal symptoms may include:
insomnia, lack of concentration, irritability, lack of trust in others, low self-esteem or confidence, embarrassment, shame, hyperactive startle reflex, and avoidance of being touched by others.[27]

RR-PTSD women are three times as likely to have depression, 13.4 times more likely to have alcohol problems, 26 times more likely to have drug abuse problems, four times as likely to report suicidal ideation, and 13 times more likely to attempt suicide. [9, 28]

Even after surviving a rape, PTSD was nothing that I could ever be ready for. Sending emails, taking exams, hearing laughter, seeing police lights: these were my daily panic attacks, not an "obsession" over my assault or listening to other survivors. My triggers weren't the memories of my rape. My triggers were my entire world.

Andrea Pino, September 2013[29]

Epidemiology of RR-PTSD

The National Women's Study (NWS), a large survey of 4008 women, investigated the occurrence and characteristics of forcible rape experiences occurring any time in a woman’s lifetime. Three waves of assessment were conducted via telephone, with Wave II occurring one year after the initial assessment and Wave III occurring two years after Wave I. The NWS found
lifetime prevalence of RR-PTSD to be 32%, compared to 9.4% from non-crime related trauma. [30, 31]

The National Violence Against Women Survey (NVAWS) was conducted in 1995-1996 via telephone surveys with a national household probability sample of 8,000 US women, 18 years of age and older. Rape screening questions used in the NVAWS were virtually identical to the questions used in the NWS. [30, 31]

These large, nationally representative samples were utilized to compile a report for each state. Of the roughly 11,000 Kentucky women aged 18 and older who participated in the two studies above, 11.1% (over 175,000) had been victimized by rape with 95,000 RR-PTSD diagnoses. Other serious mental health issues diagnosed after the rape event include: [32]

- Major depression - experienced by 30% of rape victims (over 52,000 victims in Kentucky) versus 10% of women never victimized by violent crime.
- Current major depression - experienced by 21% of rape victims (nearly 37,000 victims in Kentucky) versus 6% of women who were never victimized by violent crime.
- Serious suicidal thoughts - experienced by 33% of rape victims (nearly 58,000 victims in Kentucky) versus 8% of non-victims of crime.
- Suicide attempt - reported by 13% of rape victims (nearly 23,000 victims in Kentucky) versus only 1% of non-victims of crime.
Existing Coping and Treatment Strategies

Current treatment strategies for RR-PTSD recommended in existing literature include: exposure therapy, psychological debriefing, psychological first aid, individual and group cognitive/behavioral therapy, psychodynamic psychotherapy, and management of symptoms with medication.[27, 33] These therapies are performed by a trained professional in a controlled office setting. Exposure therapy and the PCL-5 screening instrument have been found particularly effective for RR-PTSD. [2, 9, 22, 26-29, 31, 33-38]

A single-blind randomized clinical trial found that 83% of adolescents receiving prolonged exposure therapy no longer had RR-PTSD at clinically significant levels, compared with 54% of patients who received traditional, supportive counseling. Treatment seems to persist, with improved outcomes noted at 3, 6, and 12 month follow-ups. [35]

The PCL-5 is a tool developed by the Veteran's Administration to screen for PTSD, monitor symptom severity change, and facilitate provisional PTSD diagnosis in veterans or civilians. To measure change on the PCL-5, existing research by Monson et al. suggests that a 5-10 point change is reliable (i.e. not due to chance) and a 10-20 point change is clinically meaningful [36]. Therefore, The VA recommends using 5 points as a minimum threshold for determining whether an individual has responded to an intervention and 10 points as a minimum threshold for determining whether the improvement is clinically meaningful [38].
Social Support

Sexual abuse tends to isolate the victim, reducing social support and negatively impacting feelings of safety, self-esteem, self-confidence, decision-making, and self-efficacy[6, 33, 39-41]. Victims of abuse are often afraid or ashamed to utilize support and services, even when they are offered. Limited support networks, including family and friends, often perpetuates the violence by increasing barriers to change.[34]

Zapor et al. addressed the role of social support to enable stages of change among survivors of intimate partner abuse. This research identified tailored interventions, fostering reliable and satisfying social support networks, as a vital component of successful programs addressing victims of violence.[41]

Further study is needed in the area of utilizing technology to facilitate communication and support for sexual assault survivors, as this was a gap in the existing literature.

Leech and Littlefield identified the role that positive support groups can have on the healing process of survivors[42]. The primary focus of support groups is to assist members to utilize and learn coping skills, decrease social isolation, and normalize experiences through engagement with others who have experienced similar experiences[22].

Therapies tailored to the individual’s circumstances prove more effective for the needs of the victims and aid in recovery and symptom management.[33] Utilizing gold standard treatment modalities (such as prolonged exposure therapy detailed above), RR-PTSD symptoms can be mitigated effectively. This therapy
is especially helpful for women and adolescents with a strong social support network[3, 26, 27, 29, 33, 34, 36, 39, 42]. RR-PTSD is a complex condition requiring flexibility in treatment modalities based on whether the client feels safe and what they feel capable of managing.

It is up to all of us to ensure victims of sexual violence are not left to face these trials alone. Too often, survivors suffer in silence, fearing retribution, lack of support, or that the criminal justice system will fail to bring the perpetrator to justice. We must do more to raise awareness about the realities of sexual assault; confront and change insensitive attitudes wherever they persist; enhance training and education in the criminal justice system; and expand access to critical health, legal, and protection services for survivors.

President Barack Obama, April 2012[23]

Sexual Abuse survivors express anxiety over disclosure of the event for fear of social stigma or disbelief. Lack of disclosure may lead to severe lifelong consequences, so enabling a victim to disclose in an environment of social support becomes a priority of treatment strategies.[33] It is critical that survivors feel safe in order to progress with treatment; until a victim feels safe they are not able to focus on recovery and working through the trauma.[27]
Service Animal Intervention

Existing research has documented improved perceptions of safety among study participants utilizing animal assisted therapy (AAT). To analyze the effects of experimental conditions on physiological responses to trauma, a 4 experimental condition (dog, toy dog, friendly person, alone) by 3 times of measurement (pre, during, post) MANOVA was conducted with systolic blood pressure, diastolic blood pressure and heart rate as dependent variables. Statistically and clinically significant improvement in blood pressure and heart rate were seen among participants utilizing the dog assisted therapy modality (systolic \( F(2,140) = 24.94, \ p < 0.001, \ \eta^2 = 0.27 \)), diastolic blood pressure \( (F(2,140) = 8.99, \ p< 0.001, \ \eta^2 = 0.11 \)) and heart rate \( (F(2,140) = 24.33, \ p < 0.001, \ \eta^2 = 0.26 \)). \[43\]

Lass-Henneman et al found that therapy dogs reduced subjective stress and anxiety in a “traumatic” situation, comparable to social support by a friendly person. However, PTSD patients are often not able to get social support due to emotional numbing symptoms. Anecdotal evidence suggests that PTSD patients often find it easier to establish good relationships with animals, providing preliminary support for the idea that service dogs may serve as a useful treatment adjunct in PTSD patients.\[43\]

A pre- and post-test study was conducted in a residential treatment facility to identify the impact of presence of a therapy dog on analgesic usage and monitored vital signs among patients. Within these clinical settings, research identified associations between the presence of therapy dogs and improved
patient self-reported quality of life, reduction in psychoactive medications, and reduction in as-needed medications. [44]

A unique study conducted by the Department of Defense in 2008, then replicated in 2012, by Yount et al. evaluated the effects of training service dogs as treatment for PTSD among military veterans in a large residential treatment facility. The study utilized pre- and post-measures for self-reported improvement in areas of wellness, stress, anxiety and physical pain. The PTSD veteran patients training the service dogs, residential facility staff, and families of patients all reported improved sense of wellness and decreased self-reported stress, anxiety, and physical complaints.[45]

These studies, however, were evaluating the presence of therapy dogs in limited time increments in clinical settings. There is a gap in existing research and literature to explain how the presence of a service animal affects RR-PTSD clients residing outside of clinical settings.

PTSD trained service dogs are specifically trained to address and assist with symptoms such as (but not limited to): Reclusiveness, night terrors, startle reaction/response, dissociative fugue, hyper-vigilance, neurochemical imbalances, dissociative flashbacks, sensory overload, and hallucinations.[46] Unlike the above mentioned studies utilizing therapy animals isolated to clinical settings, service dogs are allowed under the Americans with Disabilities Act of 1990 to be with their client 24/7 to provide ongoing condition management and disability assistance.
Three Theory-Based Program Pillars

Safety and Security

Existing research extensively documents the difficulties imposed upon sexual trauma survivors by the loss of safety and security[2, 4, 9, 26, 27, 34, 47]. Safety is the primary foundation of all further growth and development in Maslow's Hierarchy of Needs. Therefore, any program attempting to mitigate RR-PTSD must have a pillar improving the sense of safety and security. For this reason, the service animal was employed in this project versus a therapy animal due to the ability of a service animal to be with their handler 24/7 in any situation. People don't live their everyday lives in a clinical setting; therefore, tools to mitigate RR-PTSD need to be usable in everyday life settings, to handle everyday life situations. [43]

Empowerment and Confidence Building

This program was based upon the ecological framework of the Theory of Gender and Power. The exposures and risk factors of the client, their current psychological state, and strengths or limitations of their existing support system address each of the interwoven levels and divisions described within the theory. A theory-based intervention of this type gains the foundational structure of building on known and tested concepts underlying the condition of women struggling to address a loss of power and control over their lives.

The STAR program utilized skills-based training methods to empower participants through improved communication skills and avoidance of high-risk behaviors leading to negative health outcomes. Existing research identified
reductions in viewing intimate partner violence as acceptable among women who have received skills-based training in effective and assertive communication.[40] The acceptability of violence evolves from experience and context for each individual. Victims of violence may evolve into violence perpetrators as a result of both accepting the "norm" of violence within relationships and modeling behaviors based on exposure.[39]

The STAR program breaks the cycle of violence by utilizing behavior and response modification through positive reinforcement for both the service animal and the RR-PTSD client. As the feeling of safety grows, the RR-PTSD client could begin the process of recovery and rebuilding from a foundation based on empowerment of themselves and others. Confidence and self-esteem were developed through sharing skills-based activities with other women and achieving training goals.

**Self-Efficacy**

This program utilized the concepts of Social Cognitive Theory and the importance of self-efficacy beliefs. Through the programmatic components of the STAR program, participants changed their perceptions and identified methods of addressing their RR-PTSD other than pharmaceutical interventions. Some clients have prescribed pharmaceuticals, which this project did not interfere with or make comment upon; however, the focus and aim was to teach and reinforce the use of other methods that are within the power of the participant to manage the day to day stresses needed to mitigate RR-PTSD impact on their lives.
Implications for RR-PTSD Intervention

No existing literature describes whether service animals are effective in RR-PTSD treatment. Although preliminary research suggests this modality could be helpful, it is not currently proven. Additionally, it is unknown if service animals can assist in a client maintaining a relationship with a mental health provider.

Matsakis states:

Recovery from RR-PTSD is not solely measured by eliminating symptoms or achieving specific outcomes. Healing from this trauma does not mean that the survivor will forget the experience or never again experience any symptoms. Rather, successful recovery is subjective and measured by whether the survivor increases his or her involvement in the present, acquires skills and attitudes to regain control of his of her life, forgive him or herself for guilt, shame and other negative cognitions, and gain stress reduction skills for overall better functioning.[48]

Experts in sexual violence prevention are currently working on a variety of primary prevention efforts; thus, for this project, the community partners making up the interdisciplinary team identified a desire to address RR-PTSD among Kentucky women from a secondary prevention approach. Based on the theoretical frameworks reviewed, the Service Training and Recovery (STAR) program was developed. Three pillars were identified as the key elements to meet those needs by providing a service animal and training, a support group, and a social network component to participants. These program components were developed as tools to assist a RR-PTSD survivor in establishing a
relationship with a community mental health provider and being able to attend therapy. Chapter three will detail the methodology of this program development, proposed implementation and analysis plan.
CHAPTER 3
METHODOLOGY

The following methodology chapter will provide a detailed overview of the STAR program development and feasibility analysis plan. The first portion of this chapter will focus on development of the program including the program theoretical pillars, programmatic components, partners and role expectations, and a timeframe for implementation. The second portion of this chapter will describe the research methods utilized in the project; the participants, population and sample. This chapter will conclude with the feasibility analysis plan including instrumentation details, analytic approach, and timeframe for completion.

Intervention Development

Community partners consisting of Pawsibilities Unleashed (a service animal training facility), University of Kentucky (UK) College of Public Health (CPH), Eastern Kentucky University (EKU) Department of Psychology, the EKU Psychology Clinic, and Bluegrass.org (a behavioral health system) came together in January of 2015 to discuss women’s health in their community.

Professionals working on this interdisciplinary team held focus groups, key informant interviews, and reviewed their client data to identify trends in women clients. These professionals identified a steady rise in the number of women presenting to their facilities with a lifetime history of sexual assault and rape. Upon receiving a diagnosis of RR-PTSD these clients were often unable to develop or maintain a relationship with a professional mental health provider, due
to the symptomology of their RR-PTSD. Specifically: emotion numbing, isolation, fear, anxiety, and depression. This interprofessional team identified the need for a project addressing a non-pharmaceutical program to mitigate RR-PTSD among women in Kentucky. As such, the primary part of this project involved the development of a pilot program known as the Service Training and Recovery (STAR) program to meet the programmatic needs identified by the interdisciplinary team.

The STAR program matched interested RR-PTSD clients with a service animal after evaluation by the team to ensure the STAR program was an appropriate intervention for the participant’s individual needs. The STAR program utilized skills-based training methods in the hope of empowering participants, improving coping and communication skills, and improving avoidance of high-risk behaviors leading to negative health outcomes.

All professionals involved in this program agreed to donate their time and expenses, to provide a no-cost program for participants while identifying the feasibility of implementation and areas of future programmatic improvement. Costs are included in Chapter 4 to provide information of cost to inform future larger-scale implementation or potential replication. However, a full cost-benefit analysis was outside the scope of this feasibility study.

Intervention Components

Based on the literature review, the program was based upon three pillars: Safety and Security, Self-Confidence, and Self-Efficacy. The program also
included three programmatic components: service dog training classes up to three times a week, RR-PTSD face-to-face support group session once a week, and a social networking component.

This program matched interested RR-PTSD clients with a service animal after evaluation by the head trainer of Pawsibilities Unleashed to ensure the STAR Program was an appropriate intervention for the client’s individual needs. If so, the client was matched with a service animal that had been tested and found to have the necessary temperament and ability for PTSD service. The program lasted three months from the time of recruitment for the participant, with admission on a rolling basis. A flowchart for screening and recruiting potential clients is included later in this section (see figure 4).

The STAR program provides a new tool for female victims of sexual violence to utilize in the mitigation of disability caused by RR-PTSD. The participation of these women in the program will provide a better understanding of the community social norms and ecologic issues involved in sexual violence victimization and RR-PTSD in Central Kentucky.

**STAR Service Dog Training Component**

Group and individual training of a service animal was the first programmatic component of the STAR program. Most service dog programs place a trained service animal with a client, provide one to three weeks of training, then graduate the team and cease training services. This can be extremely stressful and can even damage the confidence of the handler when the animal doesn’t respond as they should, due to a lack of generalizing tasks to
new places, people, and commands. The STAR program utilized a model allowing the participant will train their own service dog, which is legal under the Americans with Disabilities Act [10], to improve self-confidence and service dog handling skills.

The service dog training was completed by Pawsibilities Unleashed, a service dog training facility. No fees or charges were associated with this component. The animals were provided for the participants free of charge, with current vetting as appropriate for the age of the animal. Training consisted of up to two group sessions and one individual training session a week for three months. The training classes were held at the Pawsibilities Unleashed training facility in Frankfort, Kentucky. The training was delivered by a master level dog trainer certified by the Association of Professional Dog Trainers.

The head trainer of Pawsibilities Unleashed worked with each participant's therapist to address the highest priority issues (i.e. training the service dog to create an unobtrusive space barrier between the RR-PTSD client and a stressful person, object, or situation when signaled to do so, facilitating a feeling of safety to decrease anxiety). This training met the legal requirements of the Americans with Disabilities Act stating a service animal must perform at least one task to mitigate a disability that cannot be performed by another person at all times[10].

One goal for the training was the identification of at least one task for the service animal to perform that was not already addressed by others in the participant's life (i.e. wake from night terrors, provide deep pressure therapy,
crowd control). A second goal was improved self-confidence from training the service animal.

**STAR Support Group Component**

Eastern Kentucky University Department of Clinical Psychology provided a doctoral graduate student to run a weekly face-to-face support group at the Pawsibilities Unleashed training facility. Twelve coping skills pertinent to PTSD were identified through combined efforts of EKU faculty and the student. See Appendix 5 for the twelve week coping skill schedule.

The support group was provided once weekly, on Wednesday nights, free of charge for the participants. As part of the student’s clinical experience, they completed HIPAA forms, confidentiality forms, informed consent, an intake interview, and completed the study instruments described in the instrumentation section below.

Each support group session was opened with a reminder of confidentiality, presentation of a coping skill with time to practice the coping skill, and the remainder of the time was an open format discussion. The discussion time addressed difficulties that participants reported experiencing in relation to their RR-PTSD, service animal, or use of coping skills. The doctoral student from EKU worked under the guidance of a clinical mentor, a licensed professional psychologist, and under the guidelines of the Eastern Kentucky University Psychology Clinic.

One goal of the support group was to foster self-efficacy through education and practice of coping mechanisms, including utilization of the service
animal to mitigate RR-PTSD. A second goal was to improve social support through social networking in a safe environment, among women who have experienced similar traumas.

**STAR Social Networking Component**

A social networking component finalized the programmatic development of the STAR program. Based on the literature review, existing research points to the overwhelming need for social support when recovering from a sexual assault[28, 33, 39, 41, 42, 45, 48].

The social networking component was overseen daily by a community health worker, who was a retired nurse. A Facebook closed group was set up and participants invited to join. Participants were reported to have all joined and participated in posts and a daily chat. Participants were sent a text or e-mail daily by the community health worker if they had not posted, to reach out to them to check on their well-being. Any concerns were reported to the EKU student support group leader who responded as necessary to the situation.

Safety planning was undertaken for all participants by the EKU doctoral student. Participants were informed if there was any potential risk of self-harm or harm to others that the participant's mental health professional would be notified to address any further safety concerns.

One goal of the social networking component was to provide social support and encouragement for the participants, regardless of what was available to them (or not) within their lives. For some women, this was their only source of social support. A second goal of this social networking was to foster a
feeling of cohesiveness within the group by daily check-ins. Awareness that someone was thinking of them and cared enough to check on them each day to promote their well-being fostered a sense of inclusion that many of these women lacked in their lives.

Research Methodology

Population and Sample

The population of this program was be adult (19 years and older) women who were survivors of sexual assault and had a diagnosis of RR-PTSD. The sample included 14 women, ages 19-64. Inclusion criteria included: being female, being between the ages of 19-64, and documented existing diagnosis of PTSD from a medical provider. Exclusion criteria included: not being female, not being between the ages of 19-64, and not having a documented existing diagnosis of PTSD from a medical provider. The sample included women residing in Kentucky who were currently seeking treatment for RR-PTSD.

Intervention and Recruitment

The intervention was the STAR program, as described above. This was a pilot feasibility study, so no comparison group was recruited. The program was being evaluated for feasibility of implementation and the ability to collect measurable outcomes for future iterations and possible full-scale implementation.

Recruitment consisted of word of mouth and snowball sampling through community partners consisting of: Pawsibilities Unleashed, Eastern Kentucky University Clinical Psychology Department and Clinic, Bluegrass.org Behavioral
Health, and varied online domestic violence and sexual assault survivor support groups. Women expressing interest in service dogs for their conditions were directed to contact Pawsibilities Unleashed for screening. The final convenience sample consisted of women who contacted any of the community partners regarding RR-PTSD from October through December, 2015.

Potential participants were screened carefully to ensure suitability for the program. This process was necessary due to the legal demands to meet the definition of a service animal team by the Americans with Disabilities Act. All potential participants were referred to Pawsibilities Unleashed where they entered the screening process detailed in the screening flowchart (see figure 4) and included in appendix 4. In addition to meeting legal requirements by providing proof of a disability for which a service animal could perform a mitigating task, Pawsibilities Unleashed evaluated the physical, emotional, mental and financial capability of applicants to ensure the safety and quality of life required to maintain a service animal. Screening documents for their program are included in appendix 2.

This project was implemented by community partners from October 2015 to February 2016. The program was three months for each participant, from the date of their intake assessment. The program ended after three months upon completion of the participant’s twelfth support group meeting.
Figure 4. Screening Flowchart.
Instruments and Measures

A mixed-methods approach was utilized in collecting quantitative and qualitative measures. Program facilitators kept records of the individual, support group and group training classes attended by the client. Participation was vital, so clients were required to attend at least one service dog training class weekly, at least three support group meetings a month, and respond in some way to the daily social networking contact. All instruments used are included in Appendix 3, and as stated previously, variables with descriptions are in Appendix 1.

Due to the clinical nature of the measures desired by the partners of this program, clinical expertise was solicited from the University of Kentucky College Of Social Work. Dr. Julie Cerel, a licensed clinical psychologist and expert in Suicidology, was recruited to evaluate the instruments for clinical appropriateness. The clinical outcomes were not the focus of this evaluation, but rather, the feasibility of program implementation. However, to protect participants, it was important to have a professional review that the outcome instruments of interest were appropriate. Clinical Psychology professors at Eastern Kentucky University also reviewed the instruments and measurements and ensured they met departmental guidelines and were within the assigned doctoral graduate student’s ability to conduct.

Quantitative Measures and Instruments

Pre-existing, rigorously tested instruments were utilized for qualitative data collection. Participants completed two pre-and post-intervention Stanford Patient Education Research Center instruments. The pre-test was conducted at the
intake of the program, and the post-test was conducted three months later, at the completion of the program, immediately before a narrative exit interview. These instruments were pre-tested with high scores for content validity, internal-consistency validity, and external validity. Screening instruments were included in appendix 3, with details on the validity as given by the instrument creators.

The first instrument was the Adapted Illness Intrusiveness Rating Scale. This instrument included 13 questions related to how the client’s RR-PTSD interfered with different aspects of life over 5 categories including: 1) physical well-being and diet, 2) work and finances, 3) marital, sexual and family relations, 4) recreation and social relations, and 5) other aspects of life. This instrument usually takes 2 minutes or less to complete.[49]

The second Instrument was the 32-item Chronic Disease Self-Efficacy Scale. This instrument asked the client how confident they are they could perform self-management behaviors regarding their RR-PTSD. This instrument contains 10 subscales to measure perceived self-efficacy pertaining to chronic disease. Due to the scoring methodology, any subscales can be removed if they are not of interest to the user and the remaining subscale and overall instrument reporting remain valid, as each subscale can be measured independently.

Due to the desire of collaborating partners, 3 subsets were removed from data reporting and analysis. Removed subsets include: manage shortness of breath, exercise regularly, and get information on disease. Data was gathered and analyzed for 7 subsets, including: obtain help from community, family, friends (Help); work and finances (Communicate); manage disease in general
(General); do chores (Chores); do social/recreational activities (Social); manage symptoms (Symptoms); and control/manage depression (Depression). This instrument usually takes 2 minutes or less to complete.[50]

The Veteran’s Administration PTSD symptom scale, PCL-5, was utilized to evaluate PTSD symptomology. The PCL-5 is a 17-item self-report measure reflecting DSM-IV symptoms for PTSD. Appropriate usage of this tool includes monitoring changes in PTSD symptoms. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items that have response options ranging from 1 “Not at all” to 5 “Extremely.” To measure change, existing research by Monson et al. suggests that a 5-10 point change is reliable (i.e. not due to chance) and a 10-20 point change is clinically meaningful[36]. Therefore, the VA recommends using 5 points as a minimum threshold for determining whether an individual has responded to an intervention and 10 points as a minimum threshold for determining whether the improvement is clinically meaningful[38]. This instrument usually takes a minute or less to complete.

Existing research identified a high risk of suicidal ideation among women with RR-PTSD[2, 4, 9, 26, 27, 33, 39, 51]. The Columbia-Suicide Severity Rating Scale (C-SSRS) is part of a national and international public health initiative involving the assessment of suicidality and is used extensively across health systems, armed forces, research, and among national surveillance systems. The C-SSRS is part of a worldwide ongoing public health initiative to assess suicidality and is recommended for suicide risk assessment by organizations
including: FDA, WHO, JCAHO Best Practices Library, AMA Best Practices
Adolescent Suicide, Health Canada, Korean Association for Suicide Prevention,
Japanese National Institute of Mental Health and Neurology, and the Israeli
Defense Force[52]. Safety planning with participants by the doctoral clinical
psychology student from EKU was based upon the results of this test. Existing
research has proven the convergent and divergent validity, predictive validity,
sensitivity, specificity, sensitivity to change, and internal consistency of the C-
SSRS. [53].

*Qualitative Measures*

At the beginning of the program the client completed an intake process
with the EKU clinical psychology student. This included a face-to-face
unstructured interview to evaluate baseline concerns of primary importance to
the client (e.g. being touched, night terrors) and to learn the "why" the client
believed this intervention would work for them. At the end of the intervention a
second interview was conducted to identify if initial concerns had been
addressed, satisfaction with the intervention program, and insight the client may
provide on why the program worked or did not work for them.

Structured exit interviews consisted of eight questions. Three questions
focus on any improvements regarding the three intended pillars of the program:
safety and security, self-confidence, and self-efficacy. The next three questions
focus on the three programmatic components, requesting information on what
was helpful and not helpful from each component including: service dog training,
support group, and social networking. The seventh question asked what changes
to the program the client would recommend. The final question asked the client to state in a few sentences the impact the program had on them, to get an overview of their general experience.

**Confidentiality, Privacy and IRB**

This project included only secondary analysis of existing de-identified data. Data was collected by a clinical psychology doctoral student at Eastern Kentucky University from October 2015 to February 2016 as part of clinical education. All data were pre- and post-program measures. (See attached data collection instruments (appendix 3) and variable definition list (appendix 1).) All data was self-reported by program participants. The EKU clinical psychology student completed a free-form narrative exit interview with the participants, which was transcribed by the student with all identifiers removed. Interviews focused on the experience of the participant and recommendations for future changes to the program.

**Participant Privacy and Confidentiality**

Analysis consisted of existing de-identified data gathered from screening tools, diagnostic tools, and personal interviews with participants. All de-identified data results were reported in aggregate utilizing composite measures. No original data was available for the analysis to protect participant privacy. Pre-existing de-identified data was provided from EKU for the analysis via secure login to the data which is stored on the University of Kentucky secure services via REDCap. REDCap is a HIPAA compliant data transfer program.
No other individuals have access to the data within REDCap. Data will be maintained on the University of Kentucky REDCap secure servers for six years (April 2022), at which time data will be deleted.

Institutional Review Board (IRB) approval at the University of Kentucky Medical IRB was sought and obtained on April 12, 2016 for protocol 16-0279-X2B.

**Analysis Methods**

This study includes three steps for a feasibility analysis. First, to analyze completion percentage, pre- and post-intervention counts of participants identify the percentage of those who completed the program. Characteristics of clients who did and did not complete will be analyzed. Data feasibility measures include measures of data missing and valid range tests. Adherence was analyzed utilizing attendance and participation in the three program components. Attendance was also utilized to evaluate intensity of exposure among participants to the intervention program.

Second, to analyze participant experience, quantitative analysis was obtained from pre-existing de-identified data to identify changes between pre-and post-test instruments. Due to the small sample size, significance tests were not reasonable. Therefore, data analysis focused on trends and differences between instruments, as well as positive and negative experiences.

The clinical significance and outcomes of this data were outside the scope of this feasibility study; however, it was important to identify if these instruments could successfully be utilized to gather data for the collaborating partners in the
case of a later project implementation or replication. To identify feasibility of the instruments the analysis consisted of patterns of change in measures, variation patterns across participants, direction and magnitude of change, pattern recognition, and whether change movement was in the expected direction. Median was utilized for reporting central tendency due to the small number of participants, the presence of potential data outliers, inability to assume normal distribution, and the use of ordinal data.

Qualitative analysis was undertaken from post-program narrative interviews. Due to small sample size, phrase or word trends were utilized to report qualitative results. Analysis identified trends between positive and negative experiences, program completeness, and recommendations for programmatic change.

Third, changes were recommended for future iterations of the STAR program based upon the quantitative and qualitative data analysis. Together, these three steps provided a robust analysis of the feasibility of this program.

Summary of Methodology and Implications for Public Health

Public Health Management and Policy contains a specialized track of study in Public Health Services and Systems Research (PHSSR). Utilizing the concepts of PHSSR, this project was undertaken to collaborate with an interdisciplinary team from a variety of community agencies to address the research needs of the partnering organizations.
Networking among community members to facilitate public health programs that are organized, delivered in ways that maximize population health impact, cost-effectiveness, and health equity was the basis of the STAR program. Public Health Services and Systems Research (PHSSR) identifies the implementation strategies that work, building evidence to support decision-making to promote effective, efficient, and equitable public health services and systems to promote community health and build a healthier nation.[54]

The STAR program collaborates with community partners to address an existing community health need to streamline access to resources and researchers. This partnership facilitated a pilot project to address the health impact of RR-PTSD for women in Kentucky who have been sexually assaulted. The STAR program collaboration addresses a greater public health initiative in violence prevention and facilitates breaking the cycle of violence across generations.

This project structure was developed as a doctoral dissertation process then given to the community partners to implement per their existing resources and protocols. Providing the skills needed to facilitate this program, then stepping back to empower the organizations to do their part in conducting the actual program implementation, thus creating a true partnership with the community organizations and the University. Gamm et al. described the vital role these types of programs have played in reaching the Healthy people 2010 goals, and will play to reach the 2020 goals.
Education and community-based programs and strategies are designed to reach people outside of traditional health care settings. Each setting provides opportunities to reach people using existing social structures. This maximizes impact and reduces the time and resources necessary for program development. People often have high levels of contact with these settings, both directly and indirectly. Programs that combine multiple settings can have a greater impact than programs using only 1 setting. While populations reached will sometimes overlap, people who are not accessible in 1 setting may be in another. Using nontraditional settings can help encourage informal information sharing within communities through peer social interaction.[55]

This project blended the public health concepts of upstream prevention, the PHSSR concepts of networking research efforts to achieve efficiency, accuracy, and timely results within a high quality framework, with the needs of clinical psychology interventions, non-traditional service animal based treatment, and multiple educational facilities attempting to provide research and clinical experience for doctoral students. These collaborative efforts resulted in this interdisciplinary, community-based program to mitigate RR-PTSD.

This chapter focused on project development, program components, and the program evaluation plan. Analysis of de-identified secondary data are the focus of Chapter 4, including discussion and interpretation of the findings. Chapter 5 addresses implications for public health, an overall program summary, strengths, limitations, conclusions, and recommendations.
The following chapter provides results and interpretation of findings from the STAR feasibility analysis. These details should facilitate a foundation to expand upon for a full-scale program, to enable program replication, or to base changes upon as needed. The first portion of this chapter focus on data feasibility including: descriptive statistics, completion, missing or invalid data, and adherence. The second portion of this chapter detail participant experience, and patterns of change to identify direction, magnitude, and variation among participants. This chapter concludes by detailing costs, changes recommended for the program from participants, answers to the research questions, and a brief results summary.

Data Feasibility Measures

Demographics

Star program participants included 14 women residing in Kentucky during October 2015 to February 2016. All participants self-reported race and ethnicity as non-Hispanic Caucasian. Participant age mean was 30 years, median of 24.5 years, and a range of 19-57 years. Self-reported county of residence included 6 participants in rural counties and 8 reporting urban counties.
**Completion versus non-completion**

To analyze completion percentage, pre- and post-intervention counts of participants were utilized. Of the 14 participants, 13 participants completed the program and 1 participant withdrew; culminating in 92.9% program completion.

Due to the small number of participants in the pilot, statistical and demographic comparison of those who completed versus not cannot be undertaken due to easy identification of the single non-completing participant. However, there was no obvious difference in those who completed versus not by demographic characteristics.

The participant who withdrew voluntarily self-reported they had personal issues causing time conflicts with training classes and group sessions so could not meet the program time commitments at the time of withdrawal. The participant did verbalize a wish to enter a future cohort. This suggests that withdrawal was directly associated with the time intensity required of the program. Future program iterations may consider allowing a separation and return period, reducing the time commitment required, or may consider this withdrawal rate acceptable and make no attendance requirement changes.

**Missing data and valid data ranges**

All instruments were completed in person at the intake and exit support group sessions. The instruments show 100% completion of questions, with no missing values or data values outside possible ranges. Participants were asked to circle their response and to double check each answer before stating they were finished.
Participants were informed during the intake process that they could choose to not answer questions, though none chose to exercise that option on the survey instruments or for any intake or exit questions. Exit interviews were transcribed and provided as de-identified information to facilitate trend analysis. No questions from the exit interviews were skipped by any clients. Thus, no analysis of missing data was necessary.

Adherence

Adherence was analyzed utilizing attendance in the three program components. Attendance was also utilized to evaluate intensity of exposure among participants which are detailed later in this chapter in the participant experience analysis.

Of the 13 participants who completed the program, all participants attended at least one training session a week (12 trainings), three support group sessions a month (9 sessions), and participated in the social media networking with at least one communication every other day (45 social) to either the general group chat, or in response to a private text.

Participant Experience: Quantitative Analysis

To evaluate participant experience, quantitative analysis identified changes between pre- and post-test instruments. Due to the small sample size, significance tests were not reasonable. Therefore, data analysis will focus on trends and differences between instruments, as well as positive and negative experiences.
The clinical significance and outcomes of this data were outside the scope of this feasibility study; however, it was important to identify if these instruments could successfully gather data for the collaborating partners in the case of a full project implementation. To identify feasibility of the instruments analysis consisted of: patterns of change in measures, variation patterns across participants, direction and magnitude of change, pattern recognition, and whether change movement was in the expected direction.

*Stanford Adapted Illness Intrusiveness Rating Scale*

The complexity of potential symptomology of PTSD creates a large variation in the severity of intrusiveness of life among individuals. The Stanford Adapted Illness Intrusiveness Rating Scale provides a baseline indicator for impact on quality of life from RR-PTSD among participants.

Figure 5. Stanford adapted illness Intrusiveness Rating Scale, Overall Scores
As seen in Figures 5 and 6, all participants experienced a decrease in overall illness impact median score and nearly all subscale scores. The general patterns of change show decreasing severity of illness intrusiveness with magnitude of change range of 9 overall, and subsets from 0-2. Change was in the anticipated direction.

*Stanford Chronic Disease Self-Efficacy Scale*

Self-efficacy can vary drastically among individuals suffering from any chronic condition, including RR-PTSD. The Stanford Chronic Disease Self-Efficacy Scale provided a baseline indicator for perception on ability to manage their condition among RR-PTSD participants. Data was gathered and analyzed for 7 subsets, including: obtain help from community, family, friends (Help); work and finances (Communicate); manage disease in general (General); do chores (Chores); do social/recreational activities (Social); manage symptoms
(Symptoms); and control/manage depression (Depression). All measures are on a 10 point scale. Higher numbers and scores indicate greater self-efficacy, lower scores indicate lesser self-efficacy; therefore, improvement on this instrument is measured by an increase in scores.

Figure 7. Stanford Chronic Disease Self-Efficacy Scale, Overall Scores

As seen in Figures 7 and 8, all participants experienced an increase in overall self-efficacy median score and all subscale scores. The general patterns of change show improved perception of self-efficacy with magnitude of change range from 0.33-2.16. Change was in the anticipated direction.
As seen in Figures 7 and 8, all participants experienced an increase in overall self-efficacy median score and all subscale scores. The general patterns of change show improved perception of self-efficacy with magnitude of change range from 0.33-2.16. Change was in the anticipated direction.

**PCL-5, Post-Traumatic Stress Disorder Symptom Severity Scale**

The PCL-5 measures DSM-IV PTSD symptoms to screen, diagnose, and monitor symptom changes. This instrument provides baseline and post-program symptom severity score for comparison purposes. At baseline all participants met PTSD criteria and threshold levels for a diagnosis of PTSD utilizing this instrument. All participants had a RR-PTSD diagnosis from a licensed mental or
physical health provider, further supporting utilization of this tool to appropriately measure RR-PTSD the same as other forms of PTSD. The recommended cut point for PTSD is set at 45-50. Scoring range is 17-85 with a five point change considered reliable and 10-20 point change clinically meaningful.

Figure 9. PCL-5, Post-Traumatic Stress Disorder Symptom Severity Scale, Scores

<table>
<thead>
<tr>
<th></th>
<th>Before Program</th>
<th>After Program</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>55.00</td>
<td>50.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

As seen in Figure 9, all participants experienced and decrease in overall PTSD symptom severity median score. The general pattern of change show improved self-report of self-efficacy with magnitude of change range from 50-55. Change was in the anticipated direction.

Of note, multiple clients no longer met symptom severity criteria for PTSD after the program completion. Though with such a small sample clinical impact assumptions would be premature, it does suggest positive impact of the STAR program in mitigating RR-PTSD symptoms among participants.
Columbia-Suicide Severity Rating Scale

Given the high risk of suicide among women with RR-PTSD identified from the literature review, the Columbia Suicide Severity Rating Scale (C-SSRS) was included both for safety planning and to identify if there were measurable differences in suicidal severity from baseline to post-program.

Figure 10, Columbia-Suicide Severity Risk Screening Instrument, Scores

As seen in Figure 10, all participants experienced a decrease in overall suicide severity risk median score. The general pattern of change shows decreased suicide risk with magnitude of change range from 0-1. Change was in the anticipated direction.

Of note, at the end of the program, 100% of participants report no suicidal intent. Though pre-program median value was low, some women showed high risk of suicide on individual reports. Reduction of potential suicide risk in even a
single participant is meaningful, suggesting potential for reduction of suicide risk through the STAR program.

Intensity of Exposure

The three components involved in the STAR program created a high intensity of interventions in a short period of time. Daily social media contacts, service dog training 1-3 times a week, and a face-to-face support group once a week provide high levels of interaction and attention with participants. As stated previously, attendance was a component of adherence to program requirements and completion. To evaluate the role of intensity of exposure, participants were divided into two groups, those who met below median participation (low participation) in each program component and those who met or exceeded participation (high participation).

Though imprecise, small numbers prevent a more robust analysis utilizing regression modelling and statistical significance. This method provides a general sense of overall program impact related to intensity of exposure stratified by high or low participation.

Table 2 shows the general pattern of change for program impact was affected by participation. Both high and low participation groups show general improvement in a positive direction. Overall change was in the anticipated direction. Though these findings are not surprising, validating the role of attendance does identify the importance of participation and the role of attendance protocols in programs of this type to improve effectiveness.
Table 2. Intensity of Exposure and Overall Measurement Change

<table>
<thead>
<tr>
<th>Measurement</th>
<th>High Participation</th>
<th>Low Participation</th>
<th>Change</th>
<th>Change</th>
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<tr>
<td></td>
<td>pre: median</td>
<td>post: median</td>
<td>Change</td>
<td>pre: median</td>
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<tr>
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<td>-1.50</td>
<td>0.00</td>
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<tr>
<td>Illness Severity</td>
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<td></td>
<td></td>
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<tr>
<td>Physical</td>
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<td>10.00</td>
<td>-1.00</td>
<td>11.00</td>
</tr>
<tr>
<td>Marital</td>
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<td>13.00</td>
<td>-1.00</td>
<td>12.00</td>
</tr>
<tr>
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<td>14.00</td>
<td>0.50</td>
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<tr>
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<td>11.50</td>
<td>0.00</td>
<td>19.00</td>
</tr>
<tr>
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<td>51.50</td>
<td>-5.50</td>
<td>55.00</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</tr>
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<td>1.50</td>
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<td>6.00</td>
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</tr>
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<td>5.92</td>
<td>0.83</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Included in appendix 6 the training, support group, and social media networking components were broken out individually in this method. These individual tables may prove useful in evaluating attendance requirements for future programs of this type.

**Participant Experience: Qualitative Analysis**

Qualitative analysis was undertaken from post-program narrative exit interviews. Due to small sample size, phrase or word trends were utilized to report qualitative results. This analysis focused on identifying trends between positive
and negative experiences, program completeness, and recommendations for programmatic change.

The most positive trends include 100% of participants stating they feel the program helped them mitigate their RR-PTSD symptom.

Safety and Security

All participants reported improvement in their sense of safety and security. All participants also reported improved ability to perform daily responsibilities such as: getting groceries at the store, house cleaning, attending work or class, attending mental or physical health appointments, running errands, and retrieving the mail.

Phrase trends present across all interviews included similar statements of participants feeling safer when taking their dogs outside for walks, when walking between classes on campus, going to and from their vehicles, and in social settings where men were present. Slightly over half (8) of the women reported being able to attend dinner with family or friends, go on social outings for church, family, or special occasions, and participation in community festivals or music performances. Of these women, all reported they have been unable to do these types of activities for two or more years.

Most of the women (10) reported having their service dog with them in all settings made a difference in their feelings of safety and security. All women stated they felt safer with their service animal present.

These results suggest a general trend towards improvement in areas of safety and security. Given the small sample size it would be premature to suggest
clinical significance, though results suggest positive directionality. Suggestions for a larger implementation would include measures designed to further evaluate the “how” and “why” the participants feel safer and more secure.

Self-Confidence

All participants stated they felt that being part of a program where you participate in the training of the service dog improved their self-confidence. Statements include phrases such as, “If I can train a dog to do something I didn’t even know was possible, then I can do other things too”; “I knew I would fail before I even tried, now I can see that I can accomplish things and should not assume I’ll fail before I even start”; and “I don’t think I would have known what to do with a fully trained dog, it takes me a while to learn and remember and by training the dog in positive ways it trained me to do things in a more positive way, and it worked!”

Nearly all participants (12) reported improved confidence in doing daily activities with their service dog present and knowing they could text the social media network. During moments of emotional crisis, participants all stated they used at least one of the coping skill taught in the support group and would discuss what happened either privately or in general chat with the other participants in the social networking group.

These results suggest a general trend towards improvement in areas of self-confidence. Given the small sample size it would be premature to suggest clinical significance, though results suggest positive directionality. Suggestions for
a larger implementation would include adding the Rodenberg Self-esteem scale to measure changes in self-esteem. Additionally, self-confidence may vary across tasks so asking about specific types of tasks (i.e. household chores, work/school, parenting if applicable, relationships, social activities in both small and large group settings, etc.) scored on a Likert scale would be beneficial to identify if the self-confidence varies widely across types of activities.

**Self-Efficacy**

Participants reported remarkable changes in their perceptions of self-efficacy. All participants reported feeling they could do a variety of things to manage and mitigate their RR-PTSD, with general trends for these activities including: utilizing coping skills, attending therapy, engaging in positive behaviors (i.e. exercising, cleaning, organizing, training) instead of harmful behaviors (i.e. cutting, drug or alcohol use, isolation) when exposed to triggers, training their dog and using their dog in situations they would have otherwise avoided for risk of triggers, and engaging in activities to reduce isolation.

The variety of methods identified by each woman as ways to manage their condition, outside of medication alone, was varied and reflective of the personal interests and capabilities of the individual. This was ideal, as not all methods work for all people and at all times. This robust toolbox of options may have been a contributing factor to the women’s reported sense of better being able to manage their condition.
These results suggest a general trend towards improvement in self-efficacy. Given the small sample size it would be premature to suggest clinical significance, though results suggest positive directionality. Suggestions for future program iterations include categorization and evaluation of the techniques the participants utilized to manage their RR-PTSD symptoms.

Service dog training

Participants all stated they felt the service dog training was a vital part of the program. Nearly all participants (12) expressed their belief that access to a therapy animal in specified time increments would have been better than nothing, but they felt they would not have experienced much positive impact from the program.

Examples were given by all participants expressing increased safety and security from having the service animal present in all situations, improved self-confidence from training the dog and successes in the training classes (i.e. passing American Kennel Club Canine Good Citizen, Urban Canine Good Citizen, or Puppy STAR certifications), and improved self-efficacy by feeling they could go to classes and be taking active steps to not let their RR-PTSD control their lives.

Recommendations from participants for program improvements included: having a training manual to refer to when at home, having separate classes for beginner and more advanced training to prevent repeating the same training, and having experiences handlers in class not instructing in side conversations which make it hard to concentrate on the trainer leading class.
These results suggest the value of self-training a service animal with guidance from a professional trainer. Comments were generally in a positive direction and participants verbalized overall satisfaction with the training experience. Suggestions for future program iterations involve comparison groups including: training at other facilities, utilizing multiple trainers, animal assisted therapy groups, and equine therapy groups.

**Support group**

Nearly all participants reported that they did not expect to enjoy the support group when it started but found it extremely helpful. In fact, after the STAR program conclusion, 90% of participants did not want the support group to end. EKU allowed the graduate student to continue to offer the in person support group, opening it to any women who have RR-PTSD and hosting it on EKU campus. Over half of the women continued to attend this group two months after the program completion.

Every participant stated in varying ways that the support group is an important part of the program. They stated, “training can be stressful or frustrating, the group gives us a place to share that with others going through the same thing to help each other” and “I thought it would be like therapy, you know, talking about everything that happened and what upsets me… but it isn’t, it is really support for us, for helping us get through each day and to make the future something to look forward to instead of dread.”

Recommendations from participants for program improvements included: better explanation for the intake process, a handbook with the coping skills listed
for referral when at home, and clearly listed rules and guidelines in the handbook to prevent drama and to reinforce the importance of confidentiality.

These results suggest the face-to-face support group component held value for the participants. Despite self-reported initial resistance, participants engaged in the support group and reported obtaining valuable coping skills. Suggestions for future program iterations would include comparing cohorts where support group was led by graduate students from disciplines including family therapy, psychology, social work, and faith-based therapy.

**Social media networking**

All participants utilized the social media networking components and reported that it was extremely important in completing the program. Roughly two-thirds of the women stated they used the group chat or private messaging extensively during the program. Examples included: talking to a friend they had made within the program when in crisis, sharing successes and frustrations to get ideas on how to manage those types of events in the future, sharing resources and information on training, supplies, nutrition, exercise, and healthy behaviors.

Over 90% of the participants reported dysfunctional support networks at the start of the program. By the end of the program, participants were scheduling trips to see movies, go to meals, shopping, trips to the dog park, hiking, and just spending time together to establish new friendships. The Facebook group was turned over to the group members to manage, including the group chat.
Two months after the end of the program the group still had posts daily and group chat continuing through the day, with new members being added who did not have service animals but were looking for positive support in addressing their RR-PTSD. This suggests that the social networking was facilitating participating women helping others by becoming mentors and friends outside of the STAR program and assisting others within their communities. Several participants (4) have shared their stories with others via online blogs, newspaper, or radio interviews. Those women reported they were using their experiences as a means to empower and encourage others who in crisis.

Recommendations for improvement include having “graduates” from the program act as mentors and do the check-ins with new group members in possible future cohorts, scheduled group activities to further the bonding within the social networking, and posting the handbooks recommended for training and group in the group Facebook to allow members to access it as needed easily.

These results suggest the online social networking component held value for the participants. Given the prevalence of technology and ease of access to social media, these results suggest further research utilizing technology and social media in addressing RR-PTSD.

**Post-Program Changes**

Some additional information shared in the exit interviews that are not included in the categories above include:
• Of the thirteen participants, ten were not employed or in school at the start of the program; by the end of the program all 13 were enrolled or admitted to school or had started work.

• Of the thirteen participants, eleven were not being treated by a mental health professional at the start of the program; by the end of the program all 13 had established a relationship with a therapist and were active in therapy for RR-PTSD and other mental health comorbidities.

When asked in the exit interview if these changes were due to the program, all participants stated that the skills, sense of safety, and self-confidence inspired by the program led directly to these changes.

The last interview question asked participants to state in a few sentences, what impact the program has had on them, good or bad. The responses are powerful and show promise for the importance of such a program in the future. Some of these are given below:

• “This program has given me back my voice. Before I wouldn’t talk, not to anybody. Now I will ask my doctor questions, I’ll talk to my therapist, I talk to the ladies in the group. I have a voice again and feel like I am part of my life again instead of just watching it happen.”

• “I wouldn’t be here if I hadn’t found this program. I was planning to commit suicide and had already arranged it. I heard about this program from a friend and she convinced me to try something totally different before I gave up. Since I’ve been in the program I have thoughts, I always have thought, but no serious thoughts. I have people to talk to, numbers to call, I know if I
start thinking that way to call for help and that there are people out there who really do care if I am alive. Yeah, I can definitely say if it weren't for this program I'd be dead by now."

• “This program helped my whole family. I know I am a better wife and mom now. I don’t just shut down any more or start crying or screaming at my family. When I am starting to get overwhelmed or something triggers me I can do things to help stop it from getting out of control, or just tell them I need a few minutes and go do ear strokes or deep pressure with my dog to help me calm down. They see that and it helps them too, we all try to talk and share what is upsetting us and give each other space. And we are ok with that, now we understand it isn’t rejection of each other, but just a step to dealing with things.”

• “I can manage going to work and being in meetings without panicking from men in the same room with me with a closed door. I couldn’t stand being in the grocery and having a man checking out behind me. I couldn’t go out at night and would stand for hours with my hand on the doorknob crying just trying to go outside. With my dog and knowing the ladies group is just a text away I go to the grocery, I enrolled to go back to school part-time in the fall. I just got a promotion at work because I am there and not having to leave all the time. I have at least some of my life back again.”

• “This program taught me it isn’t about having the same life, but having a new life. Everything isn’t going to be suddenly easy, but it is possible. I can manage to go do things with my family or with other people. It may be hard,
I may get scared or have a meltdown, but I can do it. And maybe the next time it'll be easier, and easier. Till one day maybe I won't even be thinking about it at all. So really, this program reminded me it's about keeping going and trying, even when it is hard right now.”

**Cost**

This program was offered free to participants, but information regarding the costs associated with implementation was gathered to inform future sustainability and feasibility evaluations. Support groups are typically free of charge, and social media networking is typically free of charge. However, volunteers are needed to ensure implementation of these services. For long-term sustainability a partnership with a University to ensure a clinical rotation is developed to provide students for these roles or allocated finances to cover the cost of a stipend or hourly wage would be needed. Supplies and administrative paperwork were less than $100 in total.

Service dog training, including the service dog and appropriate vetting, was $5,500 for the Pawsibilities Unleashed program to assist in training your own service dog at the time of this program implementation. Pawsibilities Unleashed donated 14 service animals and free service dog training for this program ($77,000 value). Other service dog training organizations range from $14,000 to $60,000 for fully trained service animals.

Mental health visits with licensed professionals were paid for by personal insurance, the Office of Vocational Rehabilitation, the Veteran’s Administration
Hospital system, or provided on a sliding fee scale at the EKU Psychology Clinic. Thus, actual amounts paid out of pocket are dependent on the resources of the individual participants, or the facility at which services are being obtained.

For this pilot study, due to the program being provided free of charge for participants, the use of an unpaid doctoral student to run the support group, and the individual paying for their own professional therapy the estimated cost per participant was $5,507.

**Research Questions**

The goals of this feasibility study focused upon two research questions. The first question was if the STAR program was feasible to implement. A completion percentage of approximately 93%, adherence to the attendance protocols, and the fact that the program was implemented by community partners answers affirmatively that the program was feasible to implement.

The second research question was if it was feasible to obtain measurable outcomes from STAR participants with RR-PTSD. Utilizing the measurement tools identified in detail in the prior methodology chapter, the C-SSRS, PCL-5, Stanford Adapted Illness Intrusiveness Rating Scale, and the Stanford Chronic Illness Self-Efficacy Scale were administered and data gathered, analyzed and reported earlier in this chapter in the patient experiences quantitative analysis. Regardless of the outcomes, this process confirms that it was feasible to obtain measurable outcomes from program participants.
Results Summary

Extensive literature review linked each of the pillars of the STAR program with existing evidence-proven methods. The novel contribution of this study was in the pairing of this knowledge with existing measurement instruments to evaluate the feasibility of a tool to enable women suffering from RR-PTSD to establish and retain a therapeutic relationship with a mental health provider. Utilizing a combination of resources, this unique program facilitated this process towards mitigation of RR-PTSD and enabled participants to experience a program aimed at improving their quality of life.

This study sought to determine feasibility of both STAR program implementation and the ability to gather useful outcome measurements to facilitate improvements to the program itself and treatment outcomes for participants. Through a mixed-methods approach, quantitative and qualitative results both support the feasibility of this program in accomplishing both implementation and outcome measurement goals.

Cost feasibility must be determined for future iterations and cohorts based upon the costs of the service dog organization training program, coverage of mental health visits, and whether staffing is on a volunteer or paid basis. Those are variable factors depending on programmatic decisions, and are not a focus of this study. This information is included, however, as cost is always a vital decision making factor in feasibility of implementation.

Though complex and robust statistical analysis were not reasonable given the small cohort size for this pilot study, simple trend analysis for magnitude,
directionality and trends towards expected outcomes were undertaken. Results show improvement of symptomology for RR-PTSD, increased self-efficacy, self-reported improved sense of safety, security, self-confidence and self-esteem. All instruments show improvement from baseline, positive impact, and meet expected directionality for change. These outcomes all point towards a program that is likely to be beneficial to participants.
CHAPTER 5
IMPLICATIONS FOR PUBLIC HEALTH

Public Health has long been seen in specific roles, primarily sanitation and filling gaps in health care for the population at large. To break out of these patterns public health has engaged in worldwide efforts to actively promote population health goals in improving holistic health. Not merely the absence of disease or access to clean water, but a healthy mind, body and spirit to enable the highest quality of life possible.

Reaching for these goals is admirable, and has moved the field of public health into new areas of focus. The flexibility to pursue a wide range of research and interests make public health an exciting and marketable career choice for aspiring professionals. One area of anticipated growth involves public health services and systems research (PHSSR). Through development of research and analytic skills great improvements can be made affecting health care and delivery, patient and population health outcomes, and improvements in system efficiency and effectiveness.

The STAR Program

Effective community-based collaboration with university trained public health professionals creates interdisciplinary efforts to address existing health concerns and disparities within communities. This type of collaboration was undertaken in the development, implementation, and feasibility evaluation of the
STAR program. This program addresses all of the main areas of public health education and practice: health behavior, epidemiology, biostatistics, environmental health, health management and policy.

Public Health Disciplines

Health behavior is a blend of individual decision making and the factors that affect individuals throughout the lifespan and at all levels of society.[15] Based upon the Theory of Gender and Power, the STAR program aims to aid the change of societal norms accepting violence against women. Sexual violence leaves women in a disadvantaged position where they feel endangered and lacking control of their own lives. Service animals aid in recovery and healing of women exposed to sexual violence who suffer from RR-PTSD through establishing a sense of safety and assisting in tasks mitigating RR-PTSD related disabilities. Through this intervention, each client becomes a living testament to the ability of women to overcome the innate power differences built into the framework of American society and facilitate their efforts to regain a desired quality of life.

Utilizing theory across multiple fields of study (i.e. psychology, sociology, family studies, and public health) facilitated developing the three pillars for the STAR program. Program components based on evidence-based practices of successful existing programs and studies to address the areas of safety and security enhancement, improving low self-confidence and self-esteem, and enabling self-efficacy in individuals diagnosed with RR-PTSD were then identified from an extensive literature review.
Epidemiology and biostatistics provide the research methods vital to include in the development of any program seeking to include measurable outcomes. Understanding the strengths and limitations of different types of studies, accurate and effective measurement and methodology, type of data required for analytic methods, and are vital to determine in the development stage of a program of this type.

Collaborating with community partners to identify their research questions, appropriate data collection instruments and methodology were established to answer the community needs. Existing instruments for measurement of changes in these areas were identified and employed to gather data for programmatic evaluation and feasibility. Each step of the STAR program development process was intricately rooted in evidence-based practice with a focus on affordability, replicability, and potential expansion.

Environmental health draws attention to issues within our surroundings that impact health and well-being. For a program of this nature, the social environment and community characteristics took great importance in the evaluation of how and where to implement the program. Factors such as ambient noise, air quality, water quality, potentially dangerous waste, and vector and fomite transmission of illness are considerations when developing and implementing a program involving animals, humans, mental and physical health facilities, and public venues.

Public health management and policy are at the very heart of the STAR program. Knowledge and understanding of legal guidelines at city, county, state,
and federal levels was undertaken to ensure compliance. Educating participants in these statutes, rights, and responsibilities were built into the training program. Community partners were involved stakeholders from program conception, however, identifying the specific skills and training required for implementation of each component required a clear understanding of management and leadership. Identifying the roles and skills needed for appropriately interacting with women who have suffered trauma was quite challenging. Through guidance from experts in clinical disciplines, public health management, and program evaluation this project was developed with these qualities embedded.

**Importance of This Project**

The STAR program was developed to address an identified need to assist women with RR-PTSD in obtaining and maintaining a therapeutic relationship with a mental health professional. This population is often resistant to seeking help for mitigation and treatment due to the fear associated with public places, being around strangers, and the anticipated trauma of focusing on the event and symptoms. Due to this, RR-PTSD often goes untreated and leads to a deteriorating quality of life, impaired self-confidence, self-esteem, and self-efficacy.[2, 22, 31, 35]

This program and the subsequent evaluation sought to answer two research questions. The first question was if the STAR program was feasible to implement. The program was implemented, showing a completion percentage of
approximately 93% and adherence to attendance protocols. This suggests to community partners that this program is feasible to implement.

One barrier to implementation feasibility is cost. This program in the current format costs roughly $5,507 per individual. It is reasonable to assume that this number may give funders pause in considering the cost-benefit. This program provided an intense three month intervention involving physical activity, social networking, provision of emotional support, skills training, safety planning, establishment of a therapeutic mental health relationship, and provision of a tool available 24/7 for years for the participant.

The CDC reports that a single suicide costs roughly $1.1 million dollars to society[56]. Based on qualitative data analysis, at least one participant self-reported they did not attempt suicide due to participation in this program. Based on this information, this one suicide attempt prevention saved the community a tremendous burden of emotional, social, and financial burden suggesting potential return on investment for prevention dollars spent funding this program.

Suicide attempts do not always end in fatality, but often cause acute or chronic conditions that are very costly to treat. Shepard et al. report it is estimated that all suicide attempts in the US cost society roughly $57,000 per event in medical and indirect economic costs. They further recommend a highly favorable benefit cost ration of 6 to 1 for investments in programs designed to prevent suicide, suggesting these could lower suicide rates 10-20 percent.[57]

Given these staggeringly high costs it becomes reasonable to consider this program, given the long-term potential benefits reaching beyond the
immediate results upon completion. Maintaining an ongoing therapeutic relationship with a mental health provider, in addition to the years of service and social networking providing ongoing social support, it is reasonable to assume the impacts could be valuable in suicide prevention efforts.

The second research question asked if it was feasible to obtain measurable outcomes from STAR participants with RR-PTSD. Valid and complete data were obtained from the C-SSRS, PCL-5, Stanford Adapted Illness Intrusiveness Rating Scale, and the Stanford Chronic Illness Self-Efficacy Scale. This clearly answers the feasibility of collecting measureable outcomes through the STAR program in the current format. To collect data capable being utilized for more rigorous statistical analysis, a larger sample should be collected, ideally with one or more comparison groups.

The limited analysis the existing data provided suggest positive program impact on participants in all measurement areas. Improvements were seen in employment, social and recreation, sense of safety and security, self-esteem, self-confidence, self-efficacy, depression and reduction in suicide risk. All changes were in positive, expected direction. Given the small sample size of this pilot study, it is strongly recommended that results be considered only in the use of recommending a larger, more robust study rather than informing clinical decision-making.

Though based on prior studies obtained in the background and literature review, the multi-faceted non-traditional approach this program with the combination of service animals, support group, social media based social
networking, and the collaboration of community partners who had no prior collaboration on a project of this type made it critical to start small and show proof of feasibility and concept. Given the potential expense of implementation, gaining insight on participant experience and gaining recommendations on programmatic changes could extremely valuable to future programs seeking to use this type of model for future expansion of this project.

**Strengths and Limitations**

Strengths of this program included the involvement of experts in the field of public health, research design, epidemiology, biostatistics, health behavior, PHSSR, suicidology, animal behavior and training, psychology, sociology, management, and public policy. Utilizing existing instruments improved likelihood of data collection and validity. Utilizing an interdisciplinary team involved community stakeholders in every aspect of the program from concept, development, implementation, evaluation and results dissemination to engage buy-in and commitment that helped facilitate cost control by providing volunteers, unpaid highly trained and knowledgeable students with expert supervisory guidance, and donated time and efforts that would have prevented this program from being implemented if funding was required from outside sources.

Though results appear promising, there are many limitations that must be considered. This program was implemented among highly motivated and invested individuals which could have biased the completion, experience and amount attention received by participants. One factor to consider in future studies
would be to include measures of staff and program implementation personnel to
determine what staffing differences and methodology may contribute to outcome.

Selection bias was a significant concern due to the recruitment and
screening processes. Recruitment was through word of mouth and led to
recruitment bias. Given the small number of women to be recruited for this study,
community partners routed interested individuals to the service training facility for
screening if interest in a service animal for RR-PTSD was mentioned. These
participants were encouraged to tell other women who they may know have RR-
PTSD.

Due to the costs associated with this program and the rigorous demands
of owning a service animal, potential participants were screened carefully.
Though no women were turned away after passing the service dog training
screening, it is possible that women who would not have had such positive
outcomes were not able to pass the initial screening to qualify for a service
animal.

This program is not intended to be for every woman with RR-PTSD. Not
everyone has a desire or the capability to own and care for a service animal.
However, for women who have the desire and capability, barriers to accessibility
to this program existed. Location of the training facility may have caused
geographic and time barriers causing these individuals to be denied entry into the
screening process. Methods could be undertaken in a more rigorous study to
control for these factors, such as: providing transportation, providing training in
multiple locations for multiple cohorts to reduce impact that distance, transportation, and associated time commitments may cause.

The selection bias created through these barriers to participation likely increased the completion percentage, adherence to protocols, and led to greater self-reported improvement measures. It is unclear if treatment effects are artificially high due to these selection effects. The STAR program was a specialized program targeting women with RR-PTSD who wanted a service animal and believed it would benefit them. Any program including service animals would, to some degree, include selection biases and subsequent effects on measurements and outcomes. Service animals are rare mainly due to financial and time commitment costs in training and maintaining their skills. Thus, though a clear limitation to this study, it is a likely component of any intervention involving service animals.

The Hawthorne Effect is present in this study. Participants were made aware in the intake and screening process that they were participating in a program seeking measureable outcomes, and thus requiring collection of pre- and post-program data. This knowledge of the observation and evaluation for improvement may have contributed to artificially inflated improvement self-reporting.

Due to the intensity of exposure in this program, the increase in attention given to participants could have affected positive outcomes. It is unclear how much of the resulting positive change trends were due to increased attention and how much were due to the program components. This program was specifically
designed to decrease isolation, increase social connectivity and networking, and to mitigate PTSD symptoms through these interventions.

The types of impact mentioned above can be addressed through analysis in a more robust study. These types of analytical processes were not undertaken due to the low power inherent in a pilot study with a small sample size. However, these types of issues can be ferreted out using more rigorous analysis techniques.

**Recommendations and Conclusions**

Development of the STAR program created a collaborative team across multiple counties with an overarching goal of positively impacting women’s health, improving quality of life, and reducing inequities inherent in the victimization of women through sexual assault. The successful outcomes in implementation, outcome measurement, and the suggested positive trends of those outcomes suggest the feasibility and lend support to a potential benefit from the STAR program.

Recommendations from program participants include changes to screening, inclusion of handbooks, and extension of the program for a longer period or ability to repeat the program a second time as a mentor to newer participants. Future research considerations should include a more robust program with a rigorous statistical analysis plan utilizing pre-existing instruments for outcome measurement, plus adding measures to control for other variables to would overcome many of the limitations of this study.
The information given in this feasibility study, including the instruments and data within the appendices, should facilitate replication of this study. It is recommended that this be undertaken with multiple cohorts to identify variance in outcomes due to location of the facilities, staff implementing the program components, and integrating racial and ethnic minorities in culturally appropriate ways.

"And the day came when the risk to remain tight in a bud was more painful than the risk it took to blossom."

Anais Nin
REFERENCES


APPENDIX 1 – DATA VARIABLES

Columbia Suicide Severity Rating Scale – all are dichotomous yes/no variables.

<table>
<thead>
<tr>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>prewishdead</td>
<td>postwishdead</td>
<td>Wished they were dead</td>
</tr>
<tr>
<td>presuithought</td>
<td>postsuithought</td>
<td>Had thoughts of suicide</td>
</tr>
<tr>
<td>presmethod</td>
<td>postmethod</td>
<td>Had thoughts of suicide by a specific method</td>
</tr>
<tr>
<td>presintplan</td>
<td>postsintplan</td>
<td>Had thoughts of suicide with a specific plan</td>
</tr>
<tr>
<td>presintnoplan</td>
<td>postintnoplan</td>
<td>Had thoughts of suicide with no specific plan</td>
</tr>
<tr>
<td>presbehev</td>
<td>postbehev</td>
<td>Prepared for suicide but did not attempt</td>
</tr>
</tbody>
</table>

Stanford Adapted Illness Intrusiveness Ratings – all are on a scale of 1-7 with 1 being “not very much” and 7 being “very much”, not applicable is an option.

<table>
<thead>
<tr>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>prehealthy</td>
<td>posthealthy</td>
<td>Feeling of being healthy</td>
</tr>
<tr>
<td>preeatdrink</td>
<td>posteatdrink</td>
<td>Things you can eat or drink</td>
</tr>
<tr>
<td>prework</td>
<td>postwork</td>
<td>Your work</td>
</tr>
<tr>
<td>presport</td>
<td>postsport</td>
<td>Playing sports or other physical recreation</td>
</tr>
<tr>
<td>prequietfun</td>
<td>postquietfun</td>
<td>Quiet recreation</td>
</tr>
<tr>
<td>prefinance</td>
<td>postfinance</td>
<td>Financial situation</td>
</tr>
<tr>
<td>prepartner</td>
<td>postpartner</td>
<td>Relationship with partner</td>
</tr>
<tr>
<td>presex</td>
<td>postsex</td>
<td>Sex life</td>
</tr>
<tr>
<td>prefamrel</td>
<td>postfamrel</td>
<td>Social activities with your family</td>
</tr>
<tr>
<td>presocial</td>
<td>postsocial</td>
<td>Social activities with your friends</td>
</tr>
<tr>
<td>prespirit</td>
<td>postspirit</td>
<td>Religious or spiritual activities</td>
</tr>
<tr>
<td>precivic</td>
<td>postcivic</td>
<td>Involvement in community or civic activities</td>
</tr>
<tr>
<td>preselfimp</td>
<td>postselfimp</td>
<td>Self-improvement or self-expression</td>
</tr>
<tr>
<td>presairphys</td>
<td>postsairphys</td>
<td>Subscale - Physical Well-Being and Diet</td>
</tr>
<tr>
<td>presairwork</td>
<td>postsairwork</td>
<td>Subscale - Work and Finances</td>
</tr>
<tr>
<td>presairmarrel</td>
<td>postsairmarrel</td>
<td>Subscale - Marital, Sexual, and Family Relations</td>
</tr>
<tr>
<td>presairrecrel</td>
<td>postsairrecrel</td>
<td>Subscale - Recreation and Social Relations</td>
</tr>
<tr>
<td>presairlife</td>
<td>postsairlife</td>
<td>Subscale - Other Aspects of Life</td>
</tr>
</tbody>
</table>

PCL-5 – all are on a scale of 0-4 with 0 being “not at all” and 4 being “extremely”.

<table>
<thead>
<tr>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>premem</td>
<td>postmem</td>
<td>Memories of experience</td>
</tr>
<tr>
<td>predream</td>
<td>postdream</td>
<td>Dreams of experience</td>
</tr>
<tr>
<td>prerelive</td>
<td>postrelive</td>
<td>Reliving experience</td>
</tr>
<tr>
<td>preupset</td>
<td>postupset</td>
<td>Upset when reminded of experience</td>
</tr>
<tr>
<td>prephysupset</td>
<td>postphysupset</td>
<td>Physical reaction when reminded of experience</td>
</tr>
<tr>
<td>preavoidmem</td>
<td>postavoidmem</td>
<td>Avoiding memories of experience</td>
</tr>
<tr>
<td>preavoidrem</td>
<td>postavoidrem</td>
<td>Avoiding external reminders of experience</td>
</tr>
<tr>
<td>preremember</td>
<td>postremember</td>
<td>Trouble remembering parts of experience</td>
</tr>
<tr>
<td>prenegself</td>
<td>postnegself</td>
<td>Negative beliefs about self</td>
</tr>
<tr>
<td>preblame</td>
<td>postblame</td>
<td>Blaming self for experience</td>
</tr>
<tr>
<td>preshame</td>
<td>postshame</td>
<td>Strong negative feelings about experience</td>
</tr>
<tr>
<td>prenointerest</td>
<td>postnointerest</td>
<td>Loss of interest in activities</td>
</tr>
<tr>
<td>predistant</td>
<td>postdistant</td>
<td>Feeling distant</td>
</tr>
<tr>
<td>prenohappy</td>
<td>postnohappy</td>
<td>Trouble experiencing positive feelings</td>
</tr>
<tr>
<td>preangry</td>
<td>postangry</td>
<td>Irritable behavior</td>
</tr>
<tr>
<td>Pre-intervention</td>
<td>Post-intervention</td>
<td>Variable</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------</td>
<td>----------</td>
</tr>
<tr>
<td>preexreg1</td>
<td>postexreg1</td>
<td>Regular gentle exercise</td>
</tr>
<tr>
<td>preexreg2</td>
<td>postexreg2</td>
<td>Regular aerobic exercise</td>
</tr>
<tr>
<td>preexreg3</td>
<td>postexreg3</td>
<td>Exercise without making symptoms worse</td>
</tr>
<tr>
<td>pregetinf</td>
<td>postgetinf</td>
<td>Get information about disease</td>
</tr>
<tr>
<td>pregethelp1</td>
<td>postgethelp1</td>
<td>Get family and friends to help with activities</td>
</tr>
<tr>
<td>pregethelp2</td>
<td>postgethelp2</td>
<td>Get emotional support from friends and family</td>
</tr>
<tr>
<td>pregethelp3</td>
<td>postgethelp3</td>
<td>Get emotional support from other resources</td>
</tr>
<tr>
<td>pregethelp4</td>
<td>postgethelp4</td>
<td>Get help with activities from other resources</td>
</tr>
<tr>
<td>precwp1</td>
<td>postcwp1</td>
<td>Communicate with physician about illness</td>
</tr>
<tr>
<td>precwp2</td>
<td>postcwp2</td>
<td>Communicate with physician about related problems</td>
</tr>
<tr>
<td>precwp3</td>
<td>postcwp3</td>
<td>Communicate with physician to work out differences</td>
</tr>
<tr>
<td>premanage1</td>
<td>postmanage1</td>
<td>Manage illness on regular basis</td>
</tr>
<tr>
<td>premanage2</td>
<td>postmanage2</td>
<td>Judge changes in illness requiring doctor visit</td>
</tr>
<tr>
<td>premanage3</td>
<td>postmanage3</td>
<td>Manage illness to reduce need to see doctor</td>
</tr>
<tr>
<td>premanage4</td>
<td>postmanage4</td>
<td>Reduce emotional distress caused by illness</td>
</tr>
<tr>
<td>premanage5</td>
<td>postmanage5</td>
<td>Reduce illness effects other than with medication</td>
</tr>
<tr>
<td>prechores1</td>
<td>postchores1</td>
<td>Complete chores</td>
</tr>
<tr>
<td>prechores2</td>
<td>postchores2</td>
<td>Run errands</td>
</tr>
<tr>
<td>prechores3</td>
<td>postchores3</td>
<td>Complete shopping</td>
</tr>
<tr>
<td>presoc1</td>
<td>postsoc1</td>
<td>Continue with hobbies</td>
</tr>
<tr>
<td>presoc2</td>
<td>postsoc2</td>
<td>Continue social visits</td>
</tr>
<tr>
<td>preman1</td>
<td>postman1</td>
<td>Reduce physical pain</td>
</tr>
<tr>
<td>preman2</td>
<td>postman2</td>
<td>Keep fatigue from interfering with activity</td>
</tr>
<tr>
<td>preman3</td>
<td>postman3</td>
<td>Keep pain from interfering with activity</td>
</tr>
<tr>
<td>preman4</td>
<td>postman4</td>
<td>Keep other symptoms from interfering with activity</td>
</tr>
<tr>
<td>preman5</td>
<td>postman5</td>
<td>Control symptoms so that they do not interfere with life</td>
</tr>
<tr>
<td>presob</td>
<td>postsob</td>
<td>Keep shortness of breath from interfering</td>
</tr>
<tr>
<td>predepress1</td>
<td>postdepress1</td>
<td>Keep from getting discouraged</td>
</tr>
<tr>
<td>predepress2</td>
<td>postdepress2</td>
<td>Keep from feeling sad</td>
</tr>
<tr>
<td>predepress3</td>
<td>postdepress3</td>
<td>Keep from feeling lonely</td>
</tr>
<tr>
<td>predepress4</td>
<td>postdepress4</td>
<td>Do something to feel better when lonely</td>
</tr>
<tr>
<td>predepress5</td>
<td>postdepress5</td>
<td>Do something to feel better when discouraged</td>
</tr>
<tr>
<td>predepress6</td>
<td>postdepress6</td>
<td>Do something to feel better when sad</td>
</tr>
<tr>
<td>presesex</td>
<td>postsesex</td>
<td>Subscale - Exercise regularly</td>
</tr>
<tr>
<td>presesinf</td>
<td>postsesinf</td>
<td>Subscale - Get information on disease</td>
</tr>
<tr>
<td>preseshelp</td>
<td>postseshelp</td>
<td>Subscale - Obtain help from community, family, friends</td>
</tr>
<tr>
<td>presescom</td>
<td>postsescom</td>
<td>Subscale - Communication with physician</td>
</tr>
<tr>
<td>presesgen</td>
<td>postsesgen</td>
<td>Subscale - Manage disease in general</td>
</tr>
<tr>
<td>preseschor</td>
<td>postseschor</td>
<td>Subscale - Do chores</td>
</tr>
<tr>
<td>presessoc</td>
<td>postsessoc</td>
<td>Subscale - Do social/recreational activities</td>
</tr>
<tr>
<td>presessymp</td>
<td>postsessymp</td>
<td>Subscale - Manage symptoms</td>
</tr>
</tbody>
</table>
### Composite measures Stanford Adapted Illness Intrusiveness Ratings

<table>
<thead>
<tr>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>Subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>presesob</td>
<td>postsessob</td>
<td>Manage shortness of breath</td>
</tr>
<tr>
<td>presesdep</td>
<td>postsesdep</td>
<td>Control/manage depression</td>
</tr>
</tbody>
</table>

### Composite measures Stanford Chronic Disease Self-Efficacy Scale

<table>
<thead>
<tr>
<th>Pre-intervention</th>
<th>Post-intervention</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>presessex</td>
<td>postsessex</td>
<td>Exercise regularly</td>
</tr>
<tr>
<td>presesinf</td>
<td>postsesinf</td>
<td>Get information on disease</td>
</tr>
<tr>
<td>preseshelp</td>
<td>postseshelp</td>
<td>Obtain help from community, family, friends</td>
</tr>
<tr>
<td>presescom</td>
<td>postsescom</td>
<td>Communication with physician</td>
</tr>
<tr>
<td>presesgen</td>
<td>postsesgen</td>
<td>Manage disease in general</td>
</tr>
<tr>
<td>preseschor</td>
<td>postseschor</td>
<td>Do chores</td>
</tr>
<tr>
<td>presessoc</td>
<td>postsessoc</td>
<td>Do social/recreational activities</td>
</tr>
<tr>
<td>presessymp</td>
<td>postsessymp</td>
<td>Manage symptoms</td>
</tr>
<tr>
<td>presessob</td>
<td>postsessob</td>
<td>Manage shortness of breath</td>
</tr>
<tr>
<td>presesdep</td>
<td>postsesdep</td>
<td>Control/manage depression</td>
</tr>
</tbody>
</table>
APPENDIX 2 - PAWSIBILITIES UNLEASHED
SERVICE DOG SCREENING FORMS

*If applicant is a minor, please fill out the following information with parent’s information.
**You MUST remit the application processing fee of $75 or your application will not be reviewed.

Name(s): _____________________________________________________________
Address: _____________________________________________________________
City, State, Zip: ____________________________
Social Security #: ______________________________________________________
Phone: __________________________________________________________________
E-Mail: __________________________________________________________________
Occupation(s): ____________________________________________________________
Annual household income: ________________________________________________

____ Married    ____Single   ____Divorced   ____Other: ________________________

Photo of the person: Please attach a photo of person receiving the dog

Statement of disability: Please attach a physician’s statement of the disability explaining the disability and how the disability affects you (or your child).

Name of person receiving the service dog (if different from name above): __________________________
Age of person getting the Service dog: ______________
What is the disability? ____________________________________________________________
What is the prognosis? ___________________________________________________________

Has person applying for this service dog applied for a service dog from any other organizations? ______
If yes, please list organizations applied to: _____________________________________________
____________________________________________________________________________
____________________________________________________________________________

Has person applying for this service dog been turned down by another service dog organization? ______
If yes, please tell us why. ____________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Does the person getting the service dog smoke? ______  Take illegal drugs? ______  Drink alcohol? ______
How many family members in the home? _____________

Please list family members living in the home:

Adults

_________________________________________ Age
_________________________________________ Age
_________________________________________ Age
_________________________________________ Age

Children

_________________________________________ Age
_________________________________________ Age
_________________________________________ Age
_________________________________________ Age
_________________________________________ Age

What medications is the applicant on? ____________________________________________

________________________________________

How have they improved/not improved with treatment? ______________________________________

________________________________________

What is the mental level of the applicant? ____________________________________________

________________________________________

Are they capable of caring for their own dog or is someone going to help them? (Family, Aid, Nurse, etc. for example) ____________________________________________

________________________________________

Is everyone in the family aware that they must work with the dog and it must listen to them as well as the handicapped handler? ____________________________________________

________________________________________

Does the applicant have any fear issues we need to know of? __________________________________

________________________________________

Anxiety attacks? ___________ Panic attacks? ___________

What is the family lifestyle? (Hiking, hunters, fishing, 4-wheeling, couch potatoes, for example) __________________________________

________________________________________
Does everyone in the family agree to and want a service dog? ________________
If not, then explain why they are in disagreement: ______________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

How much time and energy does the family have to devote to training and supervising of a service dog?____
__________________________________________________________________________________

If able to articulate, what hobbies does the adopter have? ______________________________________
__________________________________________________________________________________

Favorite places to go? ________________________________________________________________
__________________________________________________________________________________

Favorite clothing? ________________________________________________________________

Favorite foods? ________________________________________________________________

Favorite TV program? ________________________________________________________________

Describe their personality (for example, quiet and sedate with wry sense of humor or outgoing, loud, very verbal, lots of animation in body language): ______________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Describe the room they spend most time in and send a photo (can be their bedroom or favorite room of house):
__________________________________________________________________________________
__________________________________________________________________________________

Give me an example of a typical day in your home with this person: (Example: we get up at 7:00 a.m. and bath then eat, brush teeth, go out for a walk/wheelchair spin around a few blocks then come home, nap time, lunch, medication, then we do physical therapy for an hour, etc.)
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
What do you want the service animal to be able to do for you?

Do you have large family gatherings, lots of people around, and what is the personality of the family unit? (Example: other kids in the family, hubby, wife, significant other, etc.)

Tell us your story:

What else would you like us to know?
own / rent my home / apartment / trailer / townhouse / condo (Circle answers)

How long have you lived at your current address? ________________

Do you plan to move within the next 12 months? ________________

This dog is to be kept: Totally inside / Totally outside / Inside and outside (Circle answer)

Does anyone in the household have known allergies to Dogs? ______

Do you have a securely fenced yard? ______ If yes, what kind? ________________

How tall is the fence? ______ feet

How many pets do you currently own? ______ Please list type (cat, dog, etc), age, breed, sex (include if spayed/neutered) and any training they have received: ________________

________________________
________________________
________________________
________________________

Are all pets in your household current on their vaccinations? ______

Are all pets altered (spayed/neutered)? ______ If not, why? ________________

________________________
________________________

Name of Veterinarian: ________________

Are any pets in your household diagnosed with infectious diseases or viruses? ______

How many dogs have you owned in the last 5 years? ________________

Where are they now? ________________

________________________
________________________

Have any of your dogs ever displayed “dominant, aggressive, or fearful” behaviors? ______

If yes, please list those behaviors for each dog and explain what happened and tell us where the dog is now:

________________________
________________________

________________________
________________________

Have you or are you willing to pay for and attend obedience classes for your dog? ________________
Is a Service Dog right for you?

An introduction to the realities of Service Dog ownership and training

Getting a Service Dog can be a wonderful life-changing force in a person's life. These special dogs can perform many tasks that help mitigate our disabilities and provide dedicated companionship, assistance, and a brand new level of independence. You have likely heard stories of successful partnerships and maybe even lives that were saved by Service Dogs. While these success stories are real and the benefits of a Service Dog can be life changing, becoming a Service Dog owner and handler is not for everyone. The success of a Service Dog Team is only possible because of the unflagging commitment and patience of the Service Dog's owner and handler.

The first step to an effective partnership is to understand the realities of owning and working with a Service Dog. As an owner, you must be dedicated to the countless repetitions and hours it takes to build and maintain an effective working relationship with a Service Dog. This worksheet is designed to help you decide if you are truly prepared for the realities and responsibilities of Service Dog ownership and training. Please read carefully and answer honestly.

Name(s)________________________________________________________
The Service Dog is for: □Me □Someone else - who?________________________
Address________________________________________________________
Phone #________________________Email:__________________________
I would like my Service Dog Application sent to me by: □Mail □Email
What would you like a Service Dog to help with? ____________________

______________________________________________________________

______________________________________________________________

Have you owned a dog before? □Yes □No How many?______________
Do you currently own a dog? □Yes □No Other pets? □Yes □No

Can you briefly tell us about him/her/them?________________________

______________________________________________________________

Is there anything else you would like to tell us about yourself or your situation?

______________________________________________________________
Please read each paragraph below, mark Yes or No, and initial where indicated. If you have questions or comments, please use the lines available below each paragraph to share them with us.

1. A Service Dog will change your life

You already know that a Service Dog will change your life. However, it is important to ask yourself if you are truly ready. This decision may change your life in ways you do not expect. This commitment will require that you make adjustments to your home, schedule, routine, and other elements of your life in order to accommodate and provide for your new Service Dog. In addition to the requirements of dog ownership, you must commit even more time and effort to continue training your Service Dog to effectively mitigate your disability. Becoming a Service Dog owner and handler is nothing short of a complete lifestyle overhaul. These changes are felt the most in the first 6-12 months as you are adapting to life with a Service Dog. It will challenge your dedication, patience, and resolve; but if choose to stick with it, the rewards will be well worth the effort.

Questions or Comments: ____________________________________________________________________________________________

☐ No ☐ Yes _________________ initials

2. Are you ready to be a dog trainer?

If you plan to have a Service Dog of your own you will need to gain the knowledge and skills required to be a Service Dog handler. This includes maintaining and developing your dog's training once you take them home. You will be responsible for your dog's care and training with the guidance of our trainers. This also means carrying your training equipment – treats, clicker, and other supplies – with you whenever you go.

As soon as you begin working with your Service Dog, you will be training and reinforcing everything from basic manners and obedience through public access and task work. You and your dog will learn together. You will need a complete understanding of everything the dog already knows and how they were trained, as well as how to use, maintain, and advance their skills.

This is no easy undertaking and will require many hours of practice, study, and work - but we are here to help you. Being a Service Dog owner and handler requires that you train and work with your dog every day for the rest of the dog's life. Training is a life's work. It will become easier over time, but by deciding to take on a Service Dog you are committing to becoming a dog trainer for the good of your new Service Dog Team.

Questions or Comments: ____________________________________________________________________________________________

☐ No ☐ Yes _________________ initials

3. Would you consider adopting a toddler?

Being a Service Dog owner and handler is a full time job and the first 6-12 months are crucial. A new Service Dog requires near constant supervision, direction, and attention – much like a human toddler-aged child. Your dog will be curious about you, their new home, and the rules and structure of their new situation. It is important that you are there to guide them and shape their behavior every step of the way. This requires that you watch virtually every move your dog makes so that you can label, direct, and redirect their behaviors as necessary. You must be prepared to invest this kind of energy, patience, and diligence to the care and handling of your Service Dog every day.
Questions or Comments: 

I have read, understand, and accept the statements above. □ No □ Yes ___________ initials

4. A Service Dog is still a dog.

While a Service Dog is specially trained to mitigate your disability and to be well mannered in public, a Service Dog is still a dog. They are not robots that you can switch on and off and put on a shelf when you aren’t using them. They have their own thoughts and opinions and will often do things that you may not expect. Dog hair, dander, drool, chewing, and bodily functions are all components of dog ownership. Service Dog ownership is no exception. Dogs have off days, they can get sick, and do not always want to do what you ask. These things can happen at home and in public, with or without warning. It is up to you to treat these surprises as training and learning opportunities for you and your Service Dog.

Questions or Comments: 

I have read, understand, and accept the statements above. □ No □ Yes ___________ initials

5. Are you ready for boot camp?

When it is time for you to meet your new Service Dog, you will be attending a Service Dog Workshop with our trainer(s) for a minimum of 5 days. Workshops can be held at our home location in Louisville, Kentucky, or in your own community as arranged with your trainer. You must be prepared to dedicate your full attention to training during your workshop. The duration of your workshop will depend on what program you choose and the special requirements of your case. During your workshop, you will need to learn a great deal of information in a short amount of time. Workshop days will be long, exhausting, and potentially stressful. They will include on-site training, public access practice, paperwork, and homework assignments that must be completed over the course of your workshop. While having your family members present for training can be helpful to the dog’s transition to your home, it is important that you are able to dedicate your attention entirely to your training during the workshop.

Questions or Comments: 

I have read, understand, and accept the statements above. □ No □ Yes ___________ initials

6. Paperwork

There is a lot of paperwork that comes with finding, training, and working with a Service Dog. By enrolling in our program, you are also accepting all of the paperwork that comes with it. First, you will need to complete this questionnaire followed by an extensive application. If accepted into a Service Dog program, you must fill out, sign, and notarize our Service Dog Contract before beginning your training.

Once you receive your dog, you will be required to keep a daily training journal to track your dog’s training progress, public access hours, alerts, and any questions that arise. You will also receive worksheets, updates, handouts, emails, and other materials from your trainer on a regular basis. In addition to the paperwork, it is
your responsibility to communicate with your trainer via phone, email, or in person to share successes, questions, concerns, and challenges. Regular, honest, and clear communication with your trainer is critical for them to effectively support you and your Service Dog.

Questions or Comments: ____________________________________________________________

I have read, understand, and accept the statements above. □ No □ Yes ____________ initials

7. Dollars and Cents

A Service Dog is an expensive undertaking that begins before you receive your dog and will continue long after you take your new Service Dog home. You are required to submit a $50 processing fee with your Service Dog Application. You will then need to pay for your selected training program in full before receiving your dog. Additionally, you are responsible for travel expenses, lodging, and any other expenses associated with your workshop.

Once you return home with your Service Dog, you will take on all expenses associated with dog ownership such as routine and incidental veterinary care, grooming, quality dog food, treats, toys, and any other equipment and expenses necessary for the care and maintenance of your Service Dog. These general expenses can easily cost $1,000 or more each year. Ask yourself, “Can I afford a Service Dog today and for the rest of the dog’s life?”

There are many options and opportunities for financial assistance. If you will be seeking assistance, please let us know and we would be happy to direct you to a variety of resources.

Questions or Comments: __________________________________________________________

I have read, understand, and accept the statements above. □ No □ Yes ____________ initials

8. Living arrangements, family, and friends

Where you live and who you live with will have a significant impact on your Service Dog Team. Is anyone in your household allergic to dogs? Is everyone in your household ready for the commitment that comes with a Service Dog? Make no mistake, this is a decision that will affect your entire family.

Remember that your dog will need to go out for personal business and exercise a minimum of 4-5 times every day. If you don’t have a securely fenced yard, that will mean leash walking your dog 4-5 times every day. Are you capable of doing this on your own? Is there someone that will be available to help you if needed? Is that a realistic expectation in your current living arrangement?

How will your friends and family feel when you arrive at a special event – a birthday party or dinner – with your Service Dog? Will they be comfortable with your dog joining you (and them) for church or on a family vacation? Having the support of your friends and family is very important. Not having their support can throw a huge kink in your family and social life. It may even put you in a position where you feel like you have to choose between the people in your life and your Service Dog. Make sure you have carefully considered and discussed this with the people who are close to you and those who will be directly and indirectly impacted by your decision to get a Service Dog.

Ask yourself how a Service Dog will impact your school or work situation. Will you take your dog with you every day? It may be worth your while to start a dialogue with your school and/or employer. If you are getting a dog, it is only a matter of time before you will have to address the subject. Note that there are federal protections
for Service Dogs in places of work, education, and housing. However, starting the conversation early can make for an easier transition as you integrate your Service Dog into your life.

Questions or Comments: ____________________________________________________________

I have read, understand, and accept the statements above. □ No □ Yes _______________ initials


For some of us, our disabilities are easily visible to others due to the presence of crutches, a wheel chair, or other physical identifiers. For others, disabilities can be invisible. Once you decide to be a Service Dog handler, people will be able to immediately see that you are in need of special assistance even if it was previously unseen. This can be stressful and overwhelming, especially to a new Service Dog handler. If you were able to slip by unnoticed before, you will quickly realize that your Service Dog makes you the most visible person in the room. You will be asked questions about what your Service Dog is for. You may be told that your dog is unwelcome, and you may be challenged about the nature or even existence of your disability. These circumstances can be difficult, cause anxiety, and require you to advocate for your rights. For this reason, being a Service Dog handler requires understanding of Federal and State Service Dog Laws and the access rights of Service Dogs.

Questions or Comments: ____________________________________________________________

I have read, understand, and accept the statements above. □ No □ Yes _______________ initials

10. High hopes and great expectations

Take a moment and ask yourself how a Service Dog will make your life better than it is now. Why do you really want a Service Dog? Be sure that you carefully consider the realities of Service Dog ownership and determine that the benefits outweigh the demands and responsibility.

While a dog can help you live with the difficulties and complications of your disability, a Service Dog can not stop your seizures, stop your blood sugar fluctuations, eliminate your panic attacks, or make your disability disappear. You are still the same person you were before you had a Service Dog. If the dog is for your child, understand that the dog is not a babysitter and you will still have to monitor your child 24/7, just as you always have. What a Service Dog can do is provide its handler with more independence, unconditional love and companionship, peace of mind, and early warning of oncoming issues. Understand that the stories you have read online or in the paper report the best of the best — they are glorified versions of Service Dog success stories that often leave out the hard work, trials, and countless hours of training and study that enabled the dog to do their job in times of need. Make sure that you are being realistic with the hopes and expectations you have for your Service Dog Team.

Questions or Comments: ____________________________________________________________

I have read, understand, and accept the statements above. □ No □ Yes _______________ initials
11. Timing is everything

Understand that a Service Dog will take some time to settle in. They will need to re-learn their tasks in their new home and environment. They will also need to learn how to work with and for a new person (that’s you!) Like any relationship, it will take time for dog and handler to learn to effectively communicate and function as a team.

If you have determined that you are ready to take on the responsibility of a Service Dog, make sure you choose your timing carefully. You need to have the time, energy, and focus necessary to help your dog transition into their new home and job, particularly in the first 6-12 months. You must also give yourself the time to get to know your dog and adapt to your new lifestyle and responsibilities. If you are about to start your first year of college, get married, have a baby, or move into a new home, this might not be the best time to take on such a significant new project. For example, if you are a student, we generally recommend a workshop and delivery of the dog in early summer to give both dog and handler several months to get used to working together before going to school as a team for the first time. Make sure you plan your timing carefully.

Questions or Comments: ____________________________________________

I have read, understand, and accept the statements above. ☐ No ☐ Yes ____________ initials

12. There are no guarantees. You determine your own level of success!

Dogs are mirrors of the world they live in. So much of their behavior is determined by the influences in their life. When a Service Dog in Training is living with a professional trainer, they are in a carefully controlled environment. Their behavior and skills are carefully shaped and guided every day to suit the job required of them. It is crucial that this is continued by the new handler in their home once the dog becomes their responsibility. We do our very best to select canine candidates that are carefully screened and matched to each handler. Once the dog and handler have completed their workshop together and start working as a team, it is up to you to stick with the program. Your trainer is still available via phone, email, skype, or in person to coach you and answer questions as they arise. But it is ultimately you, your family, and your environment that will leave the lasting impression on your dog.

Enrolling in a Service Dog program does not guarantee that you will have a working Service Dog at the end of your program. This is true even if the dog was working well for the trainer prior to placement. Much like attending college, we can only provide you with the tools and information you need to be successful. It is up to you, the owner and handler, to use the tools and resources provided to you as directed by your trainer.

Remember: You are not buying a Service Dog, you are enrolling in a Service Dog training program.

Questions or Comments: ____________________________________________

I have read, understand, and accept the statements above. ☐ No ☐ Yes ____________ initials

Did you answer “No” to any of the above questions? Did you consider answering “No” to any of the above questions? If you are still unsure about your desire and ability to take on a Service Dog and have further questions and concerns, please tell us about them. Attach additional pages if desired.
Thank you for your interest in our program. Our course is set up like a college tuition course. You have an instructor. You have homework, you have workbooks, you have support group, you have Public Access Work. You attend at least on class per week to get your lesson plans and show us you can do the previous lesson assignment. If you are still having issues with the lesson plan we work on the issues and you have the same lesson.

We do not use prong collars, shock collars, choke chains or any form of bully training equipment. We use the clicker training method or the food lure methods. Dogs are worked off a special type of body harness.

Training a service dog takes a lot of commitment and consistency. It takes at least a year for the handler to learn what it takes to work the dog in public. The dog is the easy part, it is teaching the people how to work the dog and handle it in different situations that takes all the time and effort.

Here is what our year service dog training program consist of:

(1) The Instructor

(2) Dog is part of the program if it comes from us. If you want to get a dog from a Breeder (we do refer clients to breeders if they want a non-shedding type of dog and we recommend a specific type of breed), then we do not cover the dogs vetting, nor is it covered under our medical/vetting. We match the dog as closely to your lifestyle as we can. That is why the application has so many questions pertaining to lifestyle. We do not do the hip X-rays or other x-rays on our rescue dogs. That is not part of our vetting. If you are getting a dog from a breeder, please check their Breeder Contract to see what is covered.
(3) Dog comes with Parvo, Distemper, Rabies, Bordatella, Microchipped, Neutered or spayed, Drontal Plus worming, Heart worm tested if age appropriate, Advantage Plus for ticks, etc.

(4) Workbooks for the below lessons

(5) Lessons for Task work (what the dog does that no one else or other dog can do for your child)

(6) Lessons for Manners in Public (Go Place, Ride in Car, Seat belted in Car, Wait to get out of car, in car, etc.)

(7) Lessons for Obedience (Sit, Down, Watch Me, Stand, Come, Front, etc.)

(8) Lessons for your rights under the American Disabilities Association

(9) Lessons for Questions people ask you in public that are inappropriate and how to answer those questions. Example: (1) What's your disability (2) You don't look disabled (3) Only dogs that are Golden Retrievers, Labs or German Shepherds can be service dogs

(9) Our on-line support group and our in-house support group that meets on Thursday at 6:30.

(10) Any E-mail help, text message help or phone call help for a year.

(11) After the year, you can do add on training module's in six week blocks, 12 week blocks or other. (For example a six week block would be $225.00 for vision support, a 12 week block would be $450.00 could be for vision/mobility and so on).

(12) AKC Puppy S.T.A.R if your dog is under 6 months old when we start it.

(13) AKC CGC (American Kennel Club Canine Good Citizenship) usually taken at 6 month to 9 months of age

(14) AKC Community Canine - must have taken and passed the CGC before you are eligible to take this one

(15) Public Access Test - Taken after you and your dog have worked together as a, "team". You have to be working together a year to take this test regardless of who you train with or how you train. The ADA clearly states one year of team work before taking the Public Access Test

(16) If you have to prove that your dog is a working service dog, then we go to court with you. If it is a facility or business, then we educate that facility to the rights of a service dog. Your service dog must be in compliance with good manners, obedience and task of a working service dog.

All of these build a solid, "paper trail" that no one can dispute in a court of law. It clearly shows you have been training your dog from, "X" amount of time forward to being a fully trained
service dog.

Under the IRS Medical & Dental Expenses you can write off your dog's training, etc. under medical.

**Publication 502 (2014), Medical and Dental Expenses**

Publication 502 (2014), Medical and Dental Expenses For use in preparing 2014 Returns Table of Contents. Publication 502 - Introductory ...

### 5 Questions to Ask Before Partnering With a Service Dog

Before partnering with a Service Dog, there are several important points to consider. While thousands of individuals with a disability benefit greatly from partnering with a Service Dog, it's not the solution for everyone. If you or a loved one is considering full-time Service Dog partnership, please ask yourself the following 5 questions before making a final decision.

You must know beyond a shadow of a doubt the benefits of partnering with a Service Dog will outweigh the disadvantages before venturing any further down the path of becoming a Service Dog handler.

Before beginning, you must understand there are no wrong answers to these questions – only answers that help you make the best decision for your needs and disability. The questions are designed to help you think and they’re not meant to be answered with a simple “yes” or “no.” Partnering with a Service Dog is a huge step, and every person’s needs, desires, disability, abilities and situations are unique. Each set of circumstances deserves due consideration. However, it’s up to you to be honest with yourself. Frank and candid analysis/examination of you, your needs, your home life, your family and your disability is a requirement for ensuring you’re not making a choice that could set you back or hurt you. your relationships, your independence or the Service Dog community.

Give yourself plenty of time to muse, think and explore your feelings and thoughts concerning partnering with a Service Dog. Don’t make a decision hastily, and try to involve someone you trust in the brainstorming and soul-searching process. You must know beyond a shadow of a doubt the benefits of partnering with a Service Dog, for you, will outweigh the disadvantages. If, at the end of this post and at the end of your self-exploration, you’re not certain a canine partner is for you, it’s probably best to wait before beginning the process.

1.) Am I financially able to take on the costs of caring for a dog for 10 to 15 years?

Whether you decide to apply for a Service Dog via an established program or you opt to owner-train your partner, Service Dogs (or any dog, for that matter) are not cheap. The old saying, “There is no such thing as a free puppy,” is completely true.
Costs of Partnering With a Service Dog Via a Program

If you’re applying to an Assistance Dog or Service Dog program, costs can vary widely. There may be application fees, travel, room, and board costs, equipment fees, and then, there’s the actual cost of the dog. Many Service Dog programs charge upwards of $5,000.00 for a dog, and costs of $20,000 or more for extremely specialized or dual-trained Service Dogs are not unheard of. There are very few grants or scholarships available to defray those costs, but fundraising is always an option and if you dig deep enough, you might find some assistance available. Service Dogs of America and the Assistance Dog United Campaign occasionally have Assistance Dog/Service Dog grants and scholarships available. However, you can’t count on receiving assistance, and must carefully consider the costs of each program you interview.

Costs of Owner-Training a Service Dog

If you decide to owner-train a Service Dog partner, you’re responsible for the cost of the dog, all veterinary costs and testing, temperament testing, transport, initial training, advanced training, any necessary titling/certifications (like CGC or C.D.A.S.S. or the ATTS Temperament Test, should you decide to obtain those), all gear and equipment, and any other required supplies throughout the training process, like food, poop bags, medical supplements and other “incidentsals.”

Additionally, it’s not as simple as merely getting a dog from a shelter. Service Dogs must possess a specific temperament and trainability in order to succeed at the demanding work placed before them, and not just any dog will do. Finding the right dog for your partner can take months, and oftentimes, the only reliable solution is to obtain a well-bred puppy from a breeder known for producing Service Dogs in their lines.

You must be willing and able to fully accept the financial strain of acquiring, living with, training, caring for, loving and partnering with a Service Dog for a period of at least 10-15 years.

Well-bred Assistance Dog candidates, depending on the breed, can range from $800 to $3,000 dollars in purchase price alone. However, included in that price is the near-certainty that your potential partner is extremely likely to succeed, is physically, mentally and genetically sound and you have breeder support and backup, as well as access to resources, should you need them.

If you obtain a dog from a rescue, you must be CERTAIN he’s been thoroughly temperament tested, socialized, possesses the trainability necessary and is medically sound. Hip and elbow certifications via PENNhip or the OFA is never a bad idea, and should be considered mandatory for any dog who’s going to be doing brace/mobility support or any kind of weight-intensive task work like pulling a wheelchair or carrying heavy loads. On top of basic hip and elbow certifications, you should determine if your rescue dog is free of genetic illnesses common in their breed or breeds. Nothing is more painful or costly than spending thousands of dollars training and bonding with your partner only to find he’s going to be forced to retire years too soon due to genetic, temperamental or structural unsoundness. All in all, it’s not unreasonable to expect to spend $1,500 to $2,000 finding, transporting, testing and vetting a rescued Service
Dog candidate, and that’s before any of the training begins!

Training itself can vary widely in costs, but you must include a professional, Service Dog-savvy trainer in your plans, even if it’s only every now and again. Trainers typically charge per class, per course (one year like ours) or per hour (which typically runs $60 to $125, depending on your location).

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You must be willing and able to fully accept the financial strain of acquiring, living with, training, caring for, loving and partnering with a Service Dog for a period of at least 10-15 years.

Well-bred Assistance Dog candidates, depending on the breed, can range from $800 to $3,000 dollars in purchase price alone. However, included in that price is the near-certainty that your potential partner is extremely likely to succeed, is physically, mentally and genetically sound and you have breeder support and backup, as well as access to resources, should you need them.

If you obtain a dog from a rescue, you must be CERTAIN he’s been thoroughly temperament tested, socialized, possesses the trainability necessary and is medically sound. Hip and elbow certifications via PENNhip or the OFA is never a bad idea, and should be considered mandatory for any dog who’s going to be doing brace/mobility support or any kind of weight-intensive task work like pulling a wheelchair or carrying heavy loads. On top of basic hip and elbow certifications, you should determine if your rescue dog is free of genetic illnesses common in their breed or breeds. Nothing is more painful or costly than spending thousands of dollars training and bonding with your partner only to find he’s going to be forced to retire years too soon due to genetic, temperamental or structural unsoundness. All in all, it’s not unreasonable to expect to spend $1,500 to $2,000 finding, transporting, testing and vetting a rescued Service Dog candidate, and that’s before any of the training begins!

Training itself can vary widely in costs, but you must include a professional, Service Dog-savvy trainer in your plans, even if it’s only every now and again. Trainers typically charge per class
Finally, are you prepared to accept full financial responsibility for your potential Service Dog for the rest of his life? Whether you’re going to train him yourself or you’re receiving an Assistance Dog from a program, you and you alone are responsible for vetting, quality food, toys, any additional/necessary training, emergencies, working gear, preventative medication (heartworm, fleas/ticks), grooming, joint or other supplements if necessary, bedding/crate/home stuff, doggy proofing, and many, many, many other incidentals. The price adds up quickly, but many trainers and experts estimate costs run between $1,200 and $1,600 a year at a minimum, every year for the rest of your dog’s life, not including initial vetting, testing and purchase.

2.) Are you prepared to care or arrange for care for a dog every single day?

Partnering with a Service Dog is akin to having a toddler. Every day, without fail, your dog must be cared for. This means he’ll need taken out several times a day, cleaned up after, fed a nutritious meal at least once a day, ongoing training maintained or improved, mental or physical exercise/stimulation, groomed if necessary, and treated as a companion and living creature, not merely as a tool or object.

There Are No Exceptions

Service Dogs, like all dogs, are living, breathing animals with unique personalities, needs and requirements. They require constant upkeep and no matter what, you must be prepared to meet their needs. It doesn’t matter if it’s raining, you’re having a “bad day,” there’s 4 feet of snow on the ground, you’re in the hospital or there’s a family emergency — your Service Dog MUST be cared and provided for.

Carefully consider how a Service Dog would fit into your lifestyle and family. They’re not an inanimate piece of equipment that always works flawlessly, and caring for them isn’t always convenient. Nonetheless, even when it’s difficult, hard, or stressful, you must be willing to accept full responsibility for your canine partner at all times. Partnering with a Service Dog can have many advantages, but receiving the full benefit requires a degree of dedication many individuals can’t provide due to their unique situations, busy lives, personality or a plethora of other reasons.

Even when it’s difficult, hard, or stressful, you must be willing to accept full responsibility for your canine partner at all times.

Additionally, you must have plans in place in case of an emergency. What happens if you’re sick? Your Service Dog is ill? You’re unexpectedly hospitalized? You must have back-ups in place to ensure your partner always receives the necessary care.

3.) Are you prepared to always be the center of attention?

Working with and partnering with a Service Dog places you smack in the center of the public
Everywhere you go, people will stare, point and gawk and you and your canine partner. When partnered with a Service Dog, you will never be invisible. People will stop and engage you in long-winded conversations, ask tons of questions, many of which will be very intrusive or personal, tell you stories about how their dog would be just perfect for this kind of work or how their uncle has a dog JUST LIKE YOURS, except everything is different but the fact they’re both black.

Partnering With a Service Dog Can Be Stressful

Going places will take twice as long, and you must forget about ever being able to “just run in and get out quickly” again. The interruptions will be constant, and at times, downright offensive or rude. People will judge you, especially if you have an “invisible” disability, and you must be prepared to calmly assert your rights and the rights of your Service Dog. Expect a great degree of conflict and to have to educate more people than you ever thought possible.

You will be challenged, denied access and forced to assert yourself for not only your benefit, but that of the entire Service Dog community. You are an ambassador for the whole community, and your Service Dog might be the first people every come into contact with. You must ensure your partner is always presentable, behaving well, on task, and an excellent example of what a Service Dog should be. Partnering with a Service Dog carries responsibilities not only to the dog, but also to every other team in existence who may follow in your footsteps. You must always ensure you and your Service Dog leave an outstanding impression behind you.

You must always ensure you and your Service Dog leave an outstanding impression behind you no matter how many times you’re interrupted, challenged, judged or stopped.

If you’re not prepared or you’re unable to accept the stresses that accompany working or training a Service Dog in public and being a constant ambassador/spokesperson, you may wish to consider alternatives to partnering with a Service Dog.

4.) Are you willing and able to accept the training and socialization obligations accompanying a Service Dog?

Partnering with a Service Dog is not a “one and done” deal no matter where or how you get your partner. If you receive your Service Dog from an Assistance Dog program, you’re going to have to work very hard to bond with, learn to communicate with, and maintain your partner’s training. If you owner-train a Service Dog, you must accomplish a feat trainers work years to perfect and build training and socialization foundations from scratch, and then maintain them.

Service Dogs possess highly trained, intricate and specialized skills and degrees of training. You must be willing to provide the practice time, boundaries and training to ensure your Service Dog won’t backslide in his training, public access or level of socialization. The more your Service Dog knows or must know in order to work for you and mitigate your disability, the more vital it is that you work on maintaining and enhancing his skills as frequently as possible.
Service Dogs Aren’t Always Perfect

Service Dogs are not robots — you can’t program them and then leave them to run. Sometimes they have bad days, and some days are just truly awful, trying and exhausting. You must be prepared to be mom, dad, teacher, coach, mentor, troubleshooter, judge, jury, principal, friend, partner and sometimes, even an impartial observer. Being too emotionally invested, especially if your Service Dog is struggling or is pushing back, means you likely will miss the real issue and won’t be able to fix it. You have to provide the structure, guidelines and boundaries necessary for your partner to thrive and be able to serve you to the best of his ability.

You must commit to upholding your Service Dog’s training, skills and behavior for the rest of his life, and to be willing to admit when you need professional help.

You cannot be a pushover, and you cannot worry about “hurting his feelings.” Service Dogs must uphold very stringent standards, and sloppy or ill-behaved Service Dogs wreak havoc on the Service Dog community as a whole. You must commit to upholding your Service Dog’s training, skills and behavior for the rest of his life, and to be willing to admit when you need professional help.

Training Service Dogs Requires Specialized Skills

Another consideration concerning training and socialization involves owner-trainers in particular. Professional Service Dog trainers spend YEARS learning to train, socialize, ensure success, document and work with Service Dog candidates, prospects and partners. Not everyone possesses the training background or ability necessary to teach, perfect and hone the behaviors, skills, and tasks required for working Service Dogs, both in and out of the public eye. However, an easy solution for owner-trainers who don’t have the necessary training, documentation or socialization experience is to partner with a professional trainer willing to help guide them on their journey to partnering with a Service Dog.

5.) Are you prepared to deal with conflict?

While many people understand there will be access challenges while training, working and partnering with a Service Dog, many individuals are not prepared for the other areas of conflict they will encounter. You must be prepared to lose friends or possibly even the support of family members, especially if you have an invisible disability. Not everyone is able to understand WHY you’d need or want a Service Dog and some relationships may suffer.

Additionally, you may encounter strife at work, at school and anywhere else you frequent. Business owners with whom you had an excellent relationship with may begin to resent you and your Service Dog, even though they allow you access, as is required by law. You may receive, even though technically illegal, varying degrees of treatment or services ranging from merely rude to outright abusive.

You must be able to remain poised, professional and unflustered when faced with conflict.
Are you mentally and emotionally able to not only handle those blows, but to respond professionally, with courtesy and with poise? If not, partnering with a Service Dog may not be the best option for you.

**Partnering With a Service Dog: Final Considerations**

When it comes right down to it, no one can ask all the right questions. You and you alone know whether or not a Service Dog is right for you and your lifestyle, and at the end of the day, you’re the one who’s going to have to dig deep and accept responsibility for your choices. Service Dogs bring peace, independence, security and a new degree of ability to thousands of people, and if you’re going to be one of them, congratulations, and welcome to the Service Dog community. If you’re not, though, that’s ok — Assistance Dogs are not right for everyone, and we’d even hazard to say partnering with a Service Dog is not right for most people.

*Your dog is through Pawsibilities Unleashed and we certify and register our own dogs within our organization.*

Most countries only recognize service animals from approved programs. In those countries the programs certify their own dogs.

There are no standards or procedures for certifying a service animal under U.S. federal law. Certification is not required as a condition of using an animal as a service animal. However, the person using the animal must meet the legal (not medical) definition of "disability" and their dog must be individually trained to perform tasks that mitigate the owner’s disability. They must also have sufficient training to behave appropriately in public (no barking, making unwanted contact with other members of the public, or disrupting business by misbehaving). Service animals who pose a direct threat to others by growling, lunging, or otherwise menacing people can be barred from public access.

Fake certification is for sale over the Internet. You can check whether a certificate is from a legitimate service dog program or a scam business selling fake certification by doing a Google search on the name of the certifying agency. If it’s a scam, it will be apparent from a quick review of their website because they will sell their certification to anyone for a fee without ever actually training or evaluating the dog themselves. These organizations prey on the disabled, selling them something they don’t need for $40-$250 that they could produce at a copy center for under $5 (if they did need it, which they don’t). They are a haven for pet owners wanting an easy way get a pet into motels, on planes, or to take Fifi shopping on a lark. These businesses do a great disservice to real service dog teams by bluffing business owners into accepting ill-behaved pets as trained service animals and by taking money out of the pockets of the disabled themselves. These fakers in turn diminish the reputation of real teams by behaving inappropriately.

Real service animals don’t need certification. A business may verify an animal is a service animal by asking whether it is required because of the person's disability and what the dog is trained to do to mitigate that disability. They may ask this regardless of whether a dog is
"certified," and an owner who refuses to answer can be barred from the facility.

Service animal registration is a scam. It is a for profit business. Its purpose is to make money at the expense of gullible people with disabilities and those who just want it easier to break laws. Registration means nothing because the dog is never evaluated, never even seen by the agency issuing the registration. It's just a piece of paper that any person can buy for between $40 and $250 dollars and that could just as easily be printed on a home computer for a few cents. Registration scams exist primarily to help pet owners pass off their pets as service animals so they can get them on airplanes, into motels, and into stores with them. Real service animals don't need this kind of registration.

If you are still interested and feel a service dog would be a beneficial addition to your life style, please fill out the application and contract form. If you have any hesitation about signing it, or you need more information, please do not hesitate to contact us for clarification.

If I can be of further service to you, please contact me.

Regards,

Liz Norris

Master Service Dog Instructor

Pawsibilities Unleashed

lizznorris@gmail.com

502-418-0056
APPENDIX 3 - STAR PROGRAM DATA
COLLECTION INSTRUMENTS

Adapted Illness Intrusiveness Ratings

The following items ask about how much your illness(es) and/or its treatment interfere with your life. *Please circle the one number that best describes your current life situation.* If an item is not applicable, please check (✓) the box to indicate that this aspect of your life is not affected. Please do not leave any item unanswered.

*How much does your illness(es) and/or its treatment interfere with:*

1. Your feeling of being healthy?  □ Not applicable
   - Not very much: 1 2 3 4 5 6 7  ▶ Very much

2. The things you eat and drink?  □ Not applicable
   - Not very much: 1 2 3 4 5 6 7  ▶ Very much

3. Your work, including job, house work, chores, or errands?  □ Not applicable
   - Not very much: 1 2 3 4 5 6 7  ▶ Very much

4. Playing sports, gardening, or other physical recreation or hobbies?  □ Not applicable
   - Not very much: 1 2 3 4 5 6 7  ▶ Very much

5. Quiet recreation or hobbies, such as reading, TV, music, knitting, etc.?  □ Not applicable
   - Not very much: 1 2 3 4 5 6 7  ▶ Very much

6. Your financial situation?  □ Not applicable
   - Not very much: 1 2 3 4 5 6 7  ▶ Very much
How much does your illness(es) and/or its treatment interfere with:

7. Your relationship with your spouse or domestic partner? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

8. Your sex life? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

9. Your relationship and social activities with your family? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

10. Social activities with your friends, neighbors, or groups? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

11. Your religious or spiritual activities? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

12. Your involvement in community or civic activities? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

13. Your self-improvement or self-expression activities? □ Not applicable
   Not very much ▶ 1 2 3 4 5 6 7 ◄ Very much

Scoring
Code the number circled for each item. If more than one consecutive response is marked, code the higher number (more interference). If responses are not consecutive, do not code. If "Not applicable" is checked, code as one (1).

This scale has 5 subscales:
   - Physical Well-Being and Diet: Items 1 and 2
   - Work and Finances: Items 3 and 6
   - Marital, Sexual, and Family Relations: Items 7, 8, and 9
   - Recreation and Social Relations: Items 4, 5, and 10
   - Other Aspects of Life: Items 11, 12, and 13
Subscale scores are the mean of the items within each subscale. To score the scale, average the subscale scores to correct for differences in the numbers of items combined. You may also generate a total Perceived Intrusiveness score by summing the individual items.

Characteristics

Tested on 606 subjects with chronic disease. These data are from summing all items.

<table>
<thead>
<tr>
<th>No. of Items</th>
<th>Observed Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Internal Consistency Reliability</th>
<th>Test-Retest Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>13-91</td>
<td>44.2</td>
<td>18.3</td>
<td>.89</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source of Psychometric Data


Comments

This is an adapted version of Illness Intrusiveness Ratings scale developed by Gerald Devins. After using the original scale, we added some words to each category to make the question clearer, and also added the “not applicable” response category. The original scale instructed respondents to circle “1” if the item was not applicable, which we found resulted in missing data, especially for the sex, self-expression, religious expression and community involvement questions. The “not applicable” category has greatly reduced missing responses. If this scale is used online, we state the entire question each time (i.e., “How much does your illness and/or its treatment interfere with your feeling of being healthy?”), and use radio buttons rather than numbers and the check box. This is a good scale to measure role function; it measures a broad spectrum of life’s roles. Reprinted with permission.

References


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Stanford Patient Education Research Center
1000 Welch Road, Suite 204
Palo Alto CA 94304
(650) 723-7935
(650) 725-9422 Fax
self-management@stanford.edu
http://patienteducation.stanford.edu

Funded by the National Institute of Nursing Research (NINR)
Chronic Disease Self-Efficacy Scales

We would like to know how confident you are in doing certain activities. For each of the following questions, please choose the number that corresponds to your confidence that you can do the tasks regularly at the present time.

**Exercise Regularly Scale**

1. How confident are you that you can do gentle exercises for muscle strength and flexibility three to four times per week (range of motion, using weights, etc.)?

2. How confident are you that you can do aerobic exercise such as walking, swimming, or bicycling three to four times each week?

3. How confident are you that you can exercise without making symptoms worse?

**Get Information About Disease Item**

1. How confident are you that you can get information about your disease from community resources?

**Obtain Help from Community, Family, Friends Scale**

1. How confident are you that you can get family and friends to help you with the things you need (such as household chores like shopping, cooking, or transport)?

2. How confident are you that you can get emotional support from friends and family (such as listening or talking over your problems)?
3. How confident are you that you can get emotional support from resources other than friends or family, if needed?

4. How confident are you that you can get help with your daily tasks (such as housecleaning, yard work, meals, or personal hygiene) from resources other than friends or family, if needed?

**Communicate With Physician Scale**

1. How confident are you that you can ask your doctor things about your illness that concerns you?

2. How confident are you that you can discuss openly with your doctor any personal problems that may be related to your illness?

3. How confident are you that you can get work out differences with your doctor when they arise?

**Manage Disease in General Scale**

1. Having an illness often means doing different tasks and activities to manage your condition. How confident are you that you can do all the things necessary to manage your condition on a regular basis?

2. How confident are you that you can judge when the changes in your illness mean you should visit a doctor?

3. How confident are you that you can do the different tasks and activities needed to manage your health condition so as to reduce your need to see a doctor?

4. How confident are you that you can reduce the emotional distress caused by your health condition so that it does not affect your everyday life?
5. How confident are you that you can do things other than just taking medication to reduce how much your illness affects your everyday life?

Do Chores Scale
1. How confident are you that you can complete your household chores, such as vacuuming and yard work, despite your health problems?
2. How confident are you that you can get your errands done despite your health problems?
3. How confident are you that you can get your shopping done despite your health problems?

Social/Recreational Activities Scale
1. How confident are you that you can continue to do your hobbies and recreation?
2. How confident are you that you can continue to do the things you like to do with friends and family (such as social visits and recreation)?
5. How confident are you that you can control any symptoms or health problems you have so that they don’t interfere with the things you want to do?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

Manage Shortness of Breath Item

1. How confident are you that you can keep your shortness of breath from interfering with what you want to do?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

Control/Manage Depression Scale

1. How confident are you that you can keep from getting discouraged when nothing you do seems to make any difference?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

2. How confident are you that you can keep from feeling sad or down in the dumps?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

3. How confident are you that you can keep yourself from feeling lonely?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

4. How confident are you that you can do something to make yourself feel better when you are feeling lonely?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

5. How confident are you that you can do something to make yourself feel better when you are feeling discouraged?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

6. How confident are you that you can do something to make yourself feel better when you feel sad or down in the dumps?

| not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident |

Scoring

The score for each item is the number circled. If two consecutive numbers are circled, code the lower number (less self-efficacy). If the numbers are not consecutive, do not score the item. The score for each scale is the mean of the items. For scales of 1-2 items, do not score the scale if any item is missing; for scales with 3-4 items, do not score the scale if more than 1 item is missing; for scales with 5-6 items, do not score the scale if more than 2 items are missing. Higher number indicates higher self-efficacy.
Characteristics

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of Subjects</th>
<th>No. of Items</th>
<th>Observed Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Internal Consistency Reliability</th>
<th>Test-Retest Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise regularly</td>
<td>478</td>
<td>3</td>
<td>1-10</td>
<td>6.30</td>
<td>2.70</td>
<td>.83</td>
<td>.56</td>
</tr>
<tr>
<td>Get information on disease</td>
<td>478</td>
<td>1</td>
<td>1-10</td>
<td>7.37</td>
<td>2.65</td>
<td>—</td>
<td>.72</td>
</tr>
<tr>
<td>Obtain help from community, family, friends</td>
<td>478</td>
<td>4</td>
<td>1-10</td>
<td>6.18</td>
<td>2.42</td>
<td>.77</td>
<td>.85</td>
</tr>
<tr>
<td>Communication with physician</td>
<td>477</td>
<td>3</td>
<td>1-10</td>
<td>7.30</td>
<td>2.71</td>
<td>.90</td>
<td>.88</td>
</tr>
<tr>
<td>Manage disease in general</td>
<td>292</td>
<td>5</td>
<td>1-10</td>
<td>6.92</td>
<td>2.15</td>
<td>.87</td>
<td>—</td>
</tr>
<tr>
<td>Do chores</td>
<td>478</td>
<td>3</td>
<td>1-10</td>
<td>6.29</td>
<td>2.70</td>
<td>.91</td>
<td>.56</td>
</tr>
<tr>
<td>Do social/recreational activities</td>
<td>478</td>
<td>2</td>
<td>1-10</td>
<td>6.50</td>
<td>2.65</td>
<td>.82</td>
<td>.84</td>
</tr>
<tr>
<td>Manage symptoms</td>
<td>478</td>
<td>4</td>
<td>1-10</td>
<td>5.88</td>
<td>2.40</td>
<td>.91</td>
<td>.89</td>
</tr>
<tr>
<td>Manage shortness of breath (only reported on those reporting shortness of breath)</td>
<td>290</td>
<td>1</td>
<td>1-10</td>
<td>5.67</td>
<td>2.97</td>
<td>—</td>
<td>.82</td>
</tr>
<tr>
<td>Control/manage depression</td>
<td>478</td>
<td>6</td>
<td>1-10</td>
<td>6.51</td>
<td>2.23</td>
<td>.92</td>
<td>.82</td>
</tr>
</tbody>
</table>

Source of Psychometric Data


Comments

These scales were developed and tested for the Chronic Disease Self-Management study. We use the shorter, 6-item scale now (shown in another document), as it is much less burdensome for subjects. There are 2 ways to format these items. We use the format above, because it takes up less room on the questionnaire. The other is shown on the web page.

References


This scale is free to use without permission

Stanford Patient Education Research Center
1000 Welch Road, Suite 204
Palo Alto CA 94304
(650) 723-7935
(650) 725-9422 Fax
self-management@stanford.edu
http://patienteducation.stanford.edu

Funded by the National Institute of Nursing Research (NINR)
### PCL-5

**Instructions:** Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

<table>
<thead>
<tr>
<th>In the past month, how much were you bothered by:</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Repeated, disturbing, and unwanted memories of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Repeated, disturbing dreams of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Feeling very upset when something reminded you of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Avoiding memories, thoughts, or feelings related to the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Trouble remembering important parts of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Blaming yourself or someone else for the stressful experience or what happened after it?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>12. Loss of interest in activities that you used to enjoy?</td>
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<td>13. Feeling distant or cut off from other people?</td>
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<td>14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?</td>
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<td>15. Irritable behavior, angry outbursts, or acting aggressively?</td>
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<td>17. Feeling “superalert” or watchful or on guard?</td>
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<td>18. Feeling jumpy or easily startled?</td>
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<td>19. Having difficulty concentrating?</td>
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PCL-5 (6/14/2013) Weathers, Litz, Keane, Palmieri, Marx, & Schnurr — National Center for PTSD

118
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<tr>
<th>SUICIDE IDEATION DEFINITIONS AND PROMPTS</th>
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<td>Ask questions that are bolded and underlined.</td>
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<td><strong>Ask Questions 1 and 2</strong></td>
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<tr>
<td>1) <strong>Wish to be Dead:</strong></td>
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<td>Person endorses thoughts about a wish to be dead or not alive anymore, or wish to fall asleep and not wake up.</td>
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<td><em>Have you wished you were dead or wished you could go to sleep and not wake up?</em></td>
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<td>2) <strong>Suicidal Thoughts:</strong></td>
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<td>General non-specific thoughts of wanting to end one's life/commit suicide, <em>&quot;I've thought about killing myself&quot;</em> without general thoughts of ways to kill oneself/associated methods, intent, or plan.</td>
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<td><em>Have you actually had any thoughts of killing yourself?</em></td>
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<td>If YES to 2, ask questions 3, 4, 5, and 6. If NO to 2, go directly to question 6.</td>
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<tr>
<td>3) <strong>Suicidal Thoughts with Method (without Specific Plan or Intent to Act):</strong></td>
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<tr>
<td>Person endorses thoughts of suicide and has thought of at least one method during the assessment period. This is different than a specific plan with time, place or method details worked out. <em>&quot;I thought about taking an overdose but I never made a specific plan as to when or how I would actually do it...and I would never go through with it.&quot;</em></td>
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<tr>
<td><em>Have you been thinking about how you might kill yourself?</em></td>
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<td>4) <strong>Suicidal Intent (without Specific Plan):</strong></td>
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<td>Active suicidal thoughts of killing oneself and patient reports having <em>some intent to act on such thoughts</em>, as opposed to <em>&quot;I have the thoughts but I definitely will not do anything about them.&quot;</em></td>
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<td><em>Have you had these thoughts and had some intention of acting on them?</em></td>
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<td>5) <strong>Suicide Intent with Specific Plan:</strong></td>
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<td>Thoughts of killing oneself with details of plan fully or partially worked out and person has some intent to carry it out.</td>
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<td><em>Have you started to work out or worked out the details of how to kill yourself? Do you intend to carry out this plan?</em></td>
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<td>6) <strong>Suicide Behavior Question:</strong></td>
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<td><em>Have you ever done anything, started to do anything, or prepared to do anything to end your life?</em></td>
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<td>Examples: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, took out pills but didn’t swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn’t jump; or actually took pills, tried to shoot yourself, cut yourself, tried to hang yourself, etc.</td>
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<td>If YES, ask: <em>How long ago did you do any of these?</em></td>
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| • Over a year ago? • Between three months and a year ago? • Within the last three months?

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For inquiries and training information contact: Kelly Posner, Ph.D.
New York State Psychiatric Institute, 1051 Riverside Drive, New York, New York, 10032, possnkr@mypi.columbia.edu
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APPENDIX 4 – SCREENING FLOWCHART
APPENDIX 5 – STAR PROGRAM SUPPORT GROUP COPING SKILLS WEEKLY SCHEDULE

1) Relaxation
   a. Deep Breathing, Progressive Muscle Relaxation
   b. Using Dogs to Relax-pet, ear slides
   c. Making Coping Cards

2) Identifying Triggers For Anxiety in Social Settings
   a. Use dogs to help distract self, alert for being anxious/stressed,
      matching breathing, use to feel more comfortable during this time
   b. Women identify specific places, circumstances-so sights, sounds
      that gem them anxious-realize they need to use coping skills during
      this time to get through it instead of avoidance

3) Grounding Skills
   a. Learning how to stay grounded in the present
   b. Use the dogs as a way to stay in the present-sills to help do this,
      how to work dog to do this

4) PLAN tool - (VA instrument - may have to use generalities not full
   anagram due to it being VA)
   a. P-prepare for the situation; L-let go of worry; A-accept that you will
      feel worry/anxiety; N-normal to be stressed; Know that I have a
      plan (so coping card, skills that we have worked on so far).
   b. Go over coping skills and resources that have built on
   c. Dogs as a coping strategy-work on skills with dogs
5) Nightmares
   a. How to handle repeating nightmares; journaling them and changing
      the ending in journal
   b. Dog-sleeping beside, use to calm down after and when journaling;
      can teach to wake up when getting upset due to nightmares
6) Anger Management
   a. Education about effects of anger over time; Education that it is part
      of trauma-normal to feel angry
   b. Go over ways to experience and express anger; teach an anger
      meter-a way to monitor their own anger and know when they are
      getting angry to redirect it
   c. Dog-way to redirect, give time out and go for a walk or work on
      tasks/tricks/obedience with dog
7) Assertiveness tolls
   a. Skills for assertiveness- talking, voice, holding body
   b. Dog-use for blocking
8) Cognitive Behavior Therapy
   a. Self-talk on impact of feelings
   b. Challenging negative thoughts that escalate emotions-though
      sheets
   c. Dogs to help challenge thoughts, look to positive, behavior
      activation
9) Problem Solving Skills
   a. Go over skills (handouts)
   b. Dogs—how to they help solve problems, give alternatives in solving problems

10) Talking w/families & friends—better communication
   a. Education about anxiety—how to express to others
   b. Not focusing on trauma but results of it—anxiety, depression
      i. Triggers to increase anxiety
      ii. Making I statements, sticking to topic, staying calm, no lashing out/criticizing, express sometimes need some along time as part of healing process
   c. Can use dog as a bridge into conversation, explain how dog helps (reduce anxiety), demonstrate

11) Learning to Reconnect
   a. Skills, getting out in community
   b. Dogs—use as a way to calm and get out in community; walks, stores

12) Combating Depression
   a. Recognizing signs of depression/alerts (individualized)
   b. Cognitive Behavior Therapy
   c. Use of dogs to reengage in joyful activities
### APPENDIX 6 - INTENSITY OF EXPOSURE

#### Overall Program Impact

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<td>Depression</td>
<td>4.67</td>
<td>5.33</td>
<td>0.66</td>
<td>3.50</td>
<td>7.09</td>
<td>3.59</td>
<td>-2.93</td>
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</tbody>
</table>
Margaret Melissa Brown
Lexington, Kentucky
margaretbrown@sjhlex.org
mmbrown@uky.edu

EDUCATION

DrPH in Public Health, University of Kentucky, Lexington, KY. (expected Spring 2016, ABD 12/2015)
Dissertation Title: "Service Training and Recovery Program Effectiveness and Outcomes Analysis: A Pilot Program to Address Post-Traumatic Stress Disorder and Suicidal Ideation among Veterans"
Areas of Concentration: Health Management and Policy, Public Health Systems and Services Research
Advisors: Dr. Rick Ingram, Dr. Julie Cerel (College of Social Work)

MPH in Public Health, University of Kentucky, Lexington KY, 2013
Thesis Title: "Intimate Partner Problems and Suicide in Kentucky: A Retrospective Review of 2005-2010"
Areas of Concentration: Health Behavior, Epidemiology

B.S. in Family and Consumer Sciences, University of Kentucky, Lexington KY, 2008
A.S. in Medical Assisting, National College of Business and Technology, Lexington KY, 2005

RESEARCH HIGHLIGHTS

Publications in Peer Reviewed Journals


Manuscripts in Preparation


Conference & Meeting Presentations

• Suicide Prevention Consortium of Kentucky. (2015-present). Data presentations at monthly meetings to assist stakeholders in suicide prevention activities.

PROFESSIONAL EXPERIENCE

KentuckyOne Health, Lexington KY
2016 - Present
Manager, Healthy Communities.
• Responsible for Central and East regional market for Community Health Needs Assessment and Community Benefit reporting. Coordinate violence prevention initiatives. Oversee staff as needed for grant implementation and ongoing efforts. Collaborate with community partners for violence prevention, safe neighborhood, and healthy communities activities and initiatives.

University of Kentucky, Lexington KY
2013 - 2016
Research Administrative Coordinator, College of Public Health, Epidemiology.
Kentucky Violent Death Reporting System, Centers for Disease Control ($1,152,500; PI Brown, S)
The goal of this study is to maintain a statewide surveillance system in Kentucky designed to track trends and characteristics of violent deaths with the goal of reducing these deaths.
• Responsible for staff training in data abstraction/coding, data management, development and implementation of quality improvement projects, system evaluation, presentations, data analysis, data quality, project progress and evaluation reporting to CDC to meet grant requirements.

Research Assistant, College of Public Health, Epidemiology
Kentucky Violent Death Reporting System
The goal of this study is to maintain a statewide surveillance system in Kentucky designed to track trends and characteristics of violent deaths with the goal of reducing these deaths.
• Responsible for coding data, data analysis, data management, assisting in quality control evaluations, and presentations.

KentuckyOne Health, Lexington KY
2012 - 2016
Research Assistant, Virtual Care and Community Services
• Impact of Technology in Patient Chronic Disease Self-Management During Care Transition
The goal of this study is to conduct a study to evaluate the impact of technology among patients with chronic disease who are transitioning to the home setting. This project seeks to identify uptake issues and identify helpful technologies to empower patients to improve and maintain their health status in a home setting while improving self-efficacy and managing their chronic disease conditions.
• Responsible for presentations, data coding, data management, data analysis, project evaluation and reporting of final results.

Community Based Delivery Model: Virtual Care
The purpose of this study is to develop and maintain primary care clinics in Eastern Kentucky counties to provide primary care through a Nurse Practitioner run clinic. Tele-
health will link patients to specialty care providers. This new model was used for three separate sites.

- Responsible for staff coding training, data management, presentations, and acting as liaison between the external evaluators and the funding agency to facilitate project evaluation and reporting of final results.

Hawaii State Department of Health, Honolulu HI  
2012  
**Intern, Graduate Student Intern Program, HRSA awarded position,**
- Intimate Partner Violence (IPV) and Sexual Violence (SV) assessment development through survey design, IRB submission, recruitment of University and community partners.
- Domestic Violence Fatality Review (DVFR) database design, data entry, analysis and reporting of results.
- Various data cleaning, recoding, data entry and analysis for chronic disease projects.
- Development of published manuscripts.

Susan G. Komen, Lexington Affiliate, Lexington KY  
**Intern, Team Lead 2011 and 2015 Community Needs Assessments,**
- Needs assessment project development, recruitment of experts in Epidemiology and Research Analysis, survey design and implementation, presentations, data entry and analysis.
- National level report developed and published.

MedTech College, Lexington KY  
2010 - 2011  
**Adjunct Instructor, PRN Substitute Instructor,**
- Instruction in Anatomy and Physiology II and Medical Front Office.
- Preparation of lesson plans to meet program criteria.
- Ongoing evaluation of student needs including specialized assistance when necessary for student success.
- Promotion of the Medical Assisting field and MedTech programs.

University of Kentucky, Lexington KY  
2007 - 2010  
**Patient Services Coordinator, Pediatric Surgery,**
- Coordination of office and clinic responsibilities to facilitate optimal clinic performance.
- Implementation and maintenance of medical records, appointment scheduling, coordination with other departments to optimize patient care, telephone care follow-ups and education for patients, insurance pre-certification, chart preparation, and transcription.
- Billing, surgery scheduling, reimbursement as needed. Patient liaison and health educator.
<table>
<thead>
<tr>
<th>Date</th>
<th>Organization</th>
<th>Grant Amount</th>
<th>Proposed Role</th>
<th>Status</th>
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<tbody>
<tr>
<td>03/2016</td>
<td>KentuckyOne Health, Healthy Communities Office of Minority Health ($2,000,000)</td>
<td>PI</td>
<td>Proposed Role: PI</td>
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<td>03/2016</td>
<td>KentuckyOne Health, Healthy Communities Catholic Health Initiatives ($230,000)</td>
<td>PI/Grant Manager</td>
<td>Proposed Role: PI/Grant Manager</td>
<td>Awarded June 18, 2016</td>
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<tr>
<td>9/1/2014-08/31/19</td>
<td>Kentucky Violent Death Reporting System Centers for Disease Control ($1,152,500)</td>
<td>Research Administrative Coordinator</td>
<td>(PI: Brown (Walsh), S)</td>
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<tr>
<td>9/1/2013-9/30/2014</td>
<td>Kentucky Violent Death Reporting System Centers for Disease Control ($203,571)</td>
<td>Research Assistant</td>
<td>(PI: Walsh, S)</td>
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<td>11/2014</td>
<td>Exposure to suicide and sudden and traumatic death in military personnel: Understanding consequences and developing a brief selective intervention DOD ($1,500,000) Not funded. (score=2.1, funding line=2.0) PI: Cerel, Proposed Role: Data Coordinator</td>
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<td>11/2014</td>
<td>Exposure to suicide in National Guard personnel &amp; families: Understanding consequences and developing a brief selective intervention DOD ($2,500,000) Preproposal (not invited for full proposal) PI: Cerel, Proposed Role: Data Coordinator</td>
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**Statistical software proficiency:** SAS, SPSS, Microsoft Access, Excel.